COUNTWAY LIBRARY
3 2044 115 036 428

THE FRANCIS A. COUNTWAY LIBRARY OF MEDICINE
HARVARD MEDICAL LIBRARY-BOSTON MEDICAL LIBRARY

Digitized by the Internet Archive
in 2016

https://archive.org/details/missourimedicine8619miss

Missouri Medicine

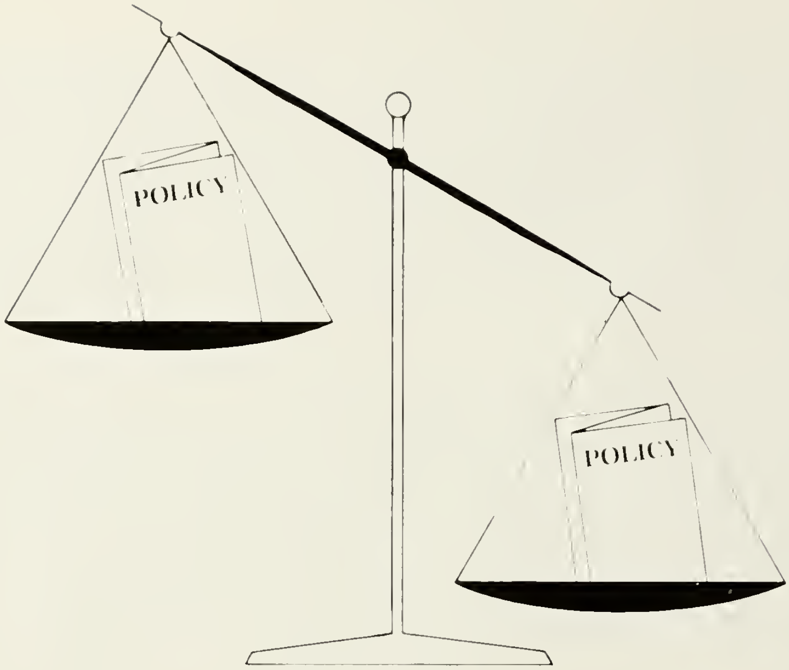
Journal of the Missouri State Medical Association

January 1989

[redacted]

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

JAN 13 1989



All professional liability insurance policies are not created equal!

You wouldn't buy a car based only on the sticker price. You'd want to know about performance. Reliability. Options. And most of all—service.

Shouldn't you invoke the same thought process when purchasing your professional liability insurance policy? For over ten years MOMEDICO has been protecting Missouri physicians against allegations of medical malpractice. As the only insurance carrier sponsored by the Missouri State Medical Association, our goal is to serve the physicians in Missouri.

Examine your options. Ask questions. We think you'll be happy with the answers we can give you.

MOMEDICO

Better Protection. Together.

10795 Watson Road, St. Louis, MO 63127
314-965-1003 or toll free 800-392-8039

Jefferson City Office, 113 Madison
Jefferson City, MO 65101, 314-634-8090

Kansas City Office, 9229 Ward Parkway, Suite 290
Kansas City, MO 64114, 816-363-6161

Founded by the Missouri State Medical Association

Contents

MSMA PHONE BOOK

Missouri State Medical Association	314/636-5151
American Medical Association	312/645-5000
MSMA Physicians' Health Program	314/768-4990
MOMEDICO	1-800-392-8039
Dodson Insurance Group	1-800-825-3760
MSMA Retirement Plan/ E. F. Hutton	*(Call collect)* 314/725-9690
Forrest T. Jones	1-800-892-7272
Fred S. James	KC 1-800-892-7105 St. Louis 1-800-445-9513
Health Care Financing Administration	816/426-5233
Intrav	314/727-0500
Medicaid Provider Relations	1-800-392-0938
Medicare Provider Relations	1-800-392-3070
Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
Missouri Department of Health	314/751-6400
Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	*(Preadmission)* 1-800-392-8060 *(General Info)* 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs	314/751-8042
Missouri State Board of Registration of the Healing Arts	314/751-2334

Cover

"Asgaard Winter," an oil painting by Rockwell Kent. It is from the private collection of Harry B. Cohen, M.D., who practices anesthesiology in Mexico, MO.

Special Article

21 **Physician Stress: Is It Inevitable?**
Morton C. Orman, M.D.
Baltimore, Maryland

Scientific Articles

27 **Hepatitis A: Analysis of a Community Outbreak**
Warren C. Lovinger, M.D.
Nevada, Missouri

31 **Colposcopy of Condylomatous Men**
James G. Blythe, M.D. and Michael J. Chehval, M.D.
St. Louis, Missouri

35 **Maxillofacial Trauma in Two Rural Level II Trauma Centers**
Walter A. Schroeder, D.O., M.D.
Cape Girardeau, Missouri

Departments

7 Progress Notes
11 Letters to the Editor
15 Editor's Desk
17 Auxiliary Message
19 Practice Management
41 Final Disciplinary Actions
42 In Memoriam
43 Physician's Recognition Awards
45 New Members
47 Medical School News
51 Continuing Medical Education
54 Information for Contributors
54 Index to Advertisers
55 Classifieds
58 Classified Advertising Form

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
JAN 13 1989

In 1928, the U.S. government established the Federal Radio Commission, sound was added to the movies and United Missouri Bank opened its Financial Counseling Division.

United Missouri Bank announced Financial Counseling Services in '28. It didn't make national headlines. It did make a difference.

Since then, United Missouri has helped hundreds of individuals and their attorneys construct estate plans.

The bank attributes its success to personal service. United Missouri's experts meet privately with customers. They get to know the customer's needs. So, the customer gets a highly individualized estate plan.

Over the years, it has made a difference with its customers' estate plans, retirement plans, trusts, investments and much more.

Today, United Missouri Bank still makes a difference. It can make a difference for you. To ask about Financial Counseling Services, call United Missouri's Craig Huntley at 556-7737. And, pick the proven performer.

UNITED MISSOURI BANKS
Members FDIC

P.O. Box 419226, Kansas City, Missouri 64141-6226

Missouri Medicine

Vol. 86, No. 1 *Journal of the Missouri State Medical Association* January 1989

Editor
Donald G. Sessions, M.D.
Associate Editor
Ramona M. Chapman, M.D.
Editor Emeritus
Jordan W. Burkey, M.D.
Managing Editor
Susan Flanigan Gold
Business Manager
Royal O. Cooper
Editorial Assistant
Valerie A. Peters

EDITORIAL BOARD

Anesthesiology
Mark G. Zukaitis, M.D.
Cardiovascular Surgery
Jack J. Curtis, M.D.
Dermatology
Philip C. Anderson, M.D.
John DeSpain, M.D.
Ernest Lorenc, M.D.
Emergency Medicine
David M. Trantham, M.D.
Family Practice
William D. Bradshaw, M.D.
Carl R. Kruse, M.D.
Kirby L. Turner, M.D.
Gastroenterology
Jay P. Marshall, II, M.D.
Hematology
William H. Crosby, M.D.
Internal Medicine
John S. Daniels, M.D.
Stephen Hamburger, M.D.
Robert K. Skillman, M.D.
Neonatology
Elizabeth J. James, M.D.
Neurosurgery
Keith Rich, M.D.
Obstetrics and Gynecology
James Daly, M.D.
Oncology
Michael C. Perry, M.D.
Ophthalmology
John C. Hagan, III, M.D.
F. Thomas Ott, M.D.
Orthopedics
William P. Thorpe, M.D.
Otorhinolaryngology
J. Regan Thomas, M.D.
Pathology
Scott A. Martin, M.D.
Pediatrics
R. Don Blim, M.D.
Physical & Rehabilitation Medicine
Paul E. Kaplan, M.D.
Plastic Surgery
LeRoy Young, M.D.
Psychiatry
William F. Clary, M.D.
J. C. Corvalan, M.D.
Radiation Therapy
MacDonald B. Logie, M.D.
Radiology
Donald R. Germann, M.D.
General Surgery
Mark S. Cotner, M.D.
Richard O. Craig, M.D.
Donald Silver, M.D.
Vascular Surgery
W. Kirt Nichols, M.D.
Urology
George M. Austin, M.D.

PUBLICATIONS COMMITTEE

Chairman
Donald G. Sessions, M.D.
Vice-Chairman
Ramona M. Chapman, M.D.
Members
Jack J. Curtis, M.D.
John S. Daniels, M.D.
Stephen Hamburger, M.D.

MSMA Officers

President	T. J. Cooper, M.D., *St. Louis*
President-Elect	Marvin A. Singleton, M.D., *Joplin*
Secretary	Norman P. Knowlton, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Kenneth R. Smith, Jr., M.D., *St. Louis*
Vice President	William R. Richardson, M.D., *Union*
Vice President	Herman J. Hausheer, M.D., *Independence*
Speaker	Arlen D. Winsky, M.D., *Springfield*
Vice-Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*

Councilors

Gary A. Dyer, M.D., *St. Joseph*, Chairman
Dorothy D. Reister, M.D., *Kansas City*, Vice Chairman
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *St. Louis*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
Carol F. Williams, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Louis*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A. J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Raymond J. Caffrey, M.D., *Independence*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Evan Saunders, medical student, *St. Louis*
Charles Barbee, M.D., *Columbia*
Victoria Martin, M.D., *Shawnee Mission, KS*

Vice Councilors

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Carl R. Kruse, M.D., *Palmyra*
Meredith Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Mark W. Martin, M.D., *Lee's Summit*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Carole Matteri, medical student, *St. Louis*
William Dorzab, M.D., *Kansas City*
Charlene Prather, M.D., *Kansas City*

AMA Delegates

Robert McDonald, M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*
George M. Bohigian, M.D., *St. Louis*
Melvin C. Kasten, M.D., *Cape Girardeau*
Larry G. Piepergerdes, M.D., *Kansas City*
Vernon H. Balster, M.D., *St. Louis*
Walter A. German, M.D., *Springfield*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251

Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.

Subscription rates: $15 per year. Interns and Residents, $7.50 per year

Second class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Department, P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.

Copyright © 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

Bounds, Poger & O'Donnell will help you reach your destination.

KNOWING PHYSICIANS
PERSONAL ATTENTION
INNOVATIVE ALTERNATIVES
TIMELY ADVICE
PRACTICAL SOLUTIONS

At Bounds, Poger & O'Donnell, we can help you reach your destination with innovative and creative solutions tailored to meet your practice's needs.

It's our business to know your practice. Our goal is to help your practice run on-course and in the right direction.

Our Physician Advisory Group has worked with physicians in solving both personal and practice problems in a variety of areas including practice management, personal financial consulting, third party reimbursement, office automation, tax planning and accounting.

Put our practical, hands-on experience with physicians and our in-depth technical and business experience to work for you.

For a checklist on how to reach your destination, call Jim Bonebrake, of our Physician Advisory Group, at 314-727-1111.

BOUNDS, POGER & O'DONNELL
CERTIFIED PUBLIC ACCOUNTANTS/BUSINESS ADVISORS

120 SOUTH CENTRAL AVE., ST. LOUIS, MISSOURI 63105, (314) 727-1111

MSMA Progress Notes

1989 Legislative forecast

What will be the hottest item facing the Misouri General Assembly in January? Chances are it will be mandatory Medicare assignment.

Mandatory assignment, which requires physicians to accept the Medicare-approved payment for all Medicare claims, was passed a couple of years ago in Massachusetts and upheld by the U.S. Supreme Court. Three other states have passed laws requiring acceptance assignment. It is expected to be introduced in Missouri in 1989.

The MSMA is alerting its members to begin contacting their state Senators and Representatives with opposition to any plan to establish mandatory Medicare assignment in Missouri. You must act now.

It is important that you explain to your state legislators that mandatory assignment is unnecessary. During the first quarter of 1988, more than 76% of all Medicare charges were taken on assignment and the rate continues to climb. Other points to emphasize are:

* Existing federal limits on Medicare reimbursement are already artifically low. Often, Medicare's "reasonable" fee allowances and MAACs do not even cover office and overhead expenses.

* Mandatory assignment would unfairly shift medical costs to other segments of the population. Wealthy elderly would be subsidized by young people beginning families and middle-class employees.

* Mandatory assignment would force many physicians, especially those in rural areas, to stop treating the elderly or to move their offices to more populated areas.

* Patients would be denied a choice of physicians. Also, physicians continuing to treat the elderly would have to limit the number of Medicare patients they could accept.

Now is the time to act. If we wait for the bill to get rolling, it may be too late!

Other medically related bills expected to be considered in the upcoming Session include:

* **Peer Review Protection:** The MSMA, along with the Board of Healing Arts, plans to introduce legislation that would establish the Board as the final authority in deciding physician peer review decisions.

* **Physical Therapists:** The P.T.s claim that physicians are forcing them out of business by refusing to refer patients unless the physician is allowed to buy into the clinic. MSMA will offer an alternative that would establish a Physical Therapists' Advisory Committee under the Board of Healing Arts. It is hoped that unethical practices by both physicians and P.T.s could then be controlled.

* **Nurses:** Registered Nurses will press for legislation that would require Medicaid and private insurance firms to reimburse nurses direct for nursing services. MSMA will point out that addition of "direct providers" will result in an increase in the cost of health care.

* **Medassist:** Although Medassist was defeated in November, discussion of the issue focused much attention on the plight of the state's uninsured population. Several bills will be introduced which would provide assistance to the uninsured. The MSMA will continue to monitor the debate.

* **Medicaid:** MSMA is again trying to convince the Governor that a substantial fee increase is needed and will continue to work with the Legislature to secure additional funding.

* **Resident Physician Hours:** MSMA will attempt to explain that the issue of regulating the number of hours resident physicians can work, should remain in the private domain.

* **Licensure:** MSMA is supporting two measures. One would provide for "registration" of all allied health groups, but would not prevent non-registered personnel from carrying out the duties of the "registered" profession. The other measure would establish a "review board" to study the various requests for licensure and then make recommendations to the Legislature on which groups should be licensed, registered, or left unregulated.

* **Mandated Insurance Benefits:** MSMA hopes to establish a committee to meet with insurers and the Missouri Division of Insurance to study the problem of mandating coverage.

* **Chiropractors:** Due to a recent court decision, chiropractors may push for legislation that would permit them to become members of a hospital medical staff. MSMA maintains that present law would permit chiropractors to become members of a hospital's allied health staff if the hospital opted to do so.

* **Generic drugs:** A bill that would

provide pharmacists more authority in substituting generic drugs for brand-name drugs may be introduced. MSMA is on record as opposed to efforts to change the generic substitution law.

With this list of issues that will play a role in the 1989 Session, physicians have the information they need to get to work. Get busy!

Physician Involvement Program

What does it take to convince doctors they MUST help if medicine is to prevail on vital legislative issues? Don't think that "someone else will do all the work for you." Less than 10% of MSMA members are actively contacting their State Legislators.

Unfortunately, senior citizens, physical therapists, pharmacists and trial attorneys are contacting their legislators. And it's pretty fair to assume that if we don't get busy, our views won't get heard and they won't help our cause.

With your help, the MSMA can do something. Get to know your legislators, become an MSMA "Key Contact," and join the Physician Involvement Program (PIP). Key Contacts are kept informed on current legislative activities and asked to forward medicine's views to their own Legislators. PIP physicians set aside one Wednesday during the Session to travel to Jefferson City and meet personally with their lawmakers.

Doctors, get busy. Your profession and your patients' health are at stake. Contact the MSMA office for information on getting started.

Nursing shortage

On December 5, the first of three interim legislative committee hearings on nursing shortages was held. The Kansas City Area Hospital Association submitted testimony, along with several other Kansas City institutions. Comments consisted of statistics in the area of nursing school shortages and hospital staff shortages. Senators Ed Dirck and Henry Panethiere raised the subject of whether hospital profits should be tapped to provide additional monetary incentives to enroll in nursing school. The committee conducted another hearing on December 17 in St. Louis to address the issue further.

Missouri Register update

Controlled substance registration: The Department of Health published proposed rule 19 CSR 30-1.035. The proposed rule would provide controls for the prescribing, dispensing and administering of controlled substances to prevent diversion from lawful usage. A public hearing is scheduled for January 10 at 9:00 a.m. at the Health Resources Conference Room in the Department of Health Building, 1738 East Elm, Jefferson City.

Vaccines: The Proposed Rule 19 CSR 20-28.030, Distribution of Childhood Vaccines, would establish uniform methods and requirements for the distribution of childhood vaccines. The proposed rule has a 30-day comment period.

Medical Student Loans: The Department published a proposed amendment and rule relating to medical student loans and repayment programs. 19 CSR 50-1.010, Loan Program for Medical Students, establishes new payment control mechanisms and 19 CSR 50-1.030, Medical Student Loan Repayment Program, establishes guidelines for implementing the program and would allow recipients to reduce their debt by providing services in areas of defined need. The proposed amendment and rule have a 30-day comment period.

MSMA Council Meeting Summary

The MSMA Council met December 10 at the Capitol Plaza Hotel in Jefferson City. Highlights of the meeting include:

* The council approved the Physicians' Health Program Policy and Procedure Manual, with correction of any typos. The council also approved the proposal that the PHP's services be restricted to use by members only, with a mechanism to facilitate processing of "hardship" cases without breaching confidentiality. This was done on advice of legal counsel.

* The council directed the Committee/Director of PHP to make additional attempts to collect past-due accounts before writing them off.

* The council approved the appointment of Vernon Leroy Young, M.D., to the Editorial Board of the **Missouri Medicine** as the plastic surgery reviewer, on recommendation by Donald Sessions, M.D., editor of the journal.

* Because of the increased attention paid to the new smokeless cigarette, being marketed in Missouri, the council voted to have MSMA go on record as opposed to smokeless cigarette(s).

* The council approved MSMA's

paying for plane fare for Patrick Reynolds, heir to the fortune of RJ Reynolds tobacco magnate, when the Department of Health holds hearings on smokeless cigarette. Mr. Reynolds is an outspoken opponent of smoking.

* The council approved the 1989 budget as presented by MSMA Treasurer Harry Cole, M.D.

* The council approved CME Accreditations for St. Luke's in Chesterfield, John Fitzgibbons in Marshall, KC O&O, and Memorial Community in Jefferson City.

* The council approved a motion by Michael Conoyer, M.D., that the Legislative Committee be authorized and directed to draw up a proactive "wish list" of legislative issues they want to act upon, with an estimate of the time frame necessary for each, specific targets for funding and a priority ranking of items. The issues should include, but not be limited to, Medicaid fee schedule reform and tort reform. The council also approved an amendment to the motion from Fred Hahn, M.D., that a preliminary "wish list" be presented before the Council at its April meeting, with a final report in June.

* The council reiterated its belief that communications between the PRO and physicians should be confidential, physician-to-physician.

* H. Peter Ekern, M.D., reported to the council on the ongoing renovation of 113 and 115 Madison. The council accepted the report of the Building Committee.

* Marvin Singleton, M.D., of Joplin, announced his intentions to resign from his position as AMA Alternate Delegate for personal reasons. He thanked the MSMA council for their ongoing support and for the opportunity to serve the Association. The council in turn, voted to thank Dr. Singleton for his excellent service to the MSMA and also to the PAC.

* George M. Bohigian, M.D., announced his intentions to run for a seat on the AMA Board of Trustees. The council voted by secret ballot, to endorse and support, with a commitment of $10,000 his candidacy. Dr. Bohigian expressed his gratitude, promising to put forth his best efforts.

Consumer price index update

Here are the figures released in October 1988 by the Bureau of Labor Statistics regarding the Consumer Price Index (CPI) for all urban consumers. The "All Items" index rose only 3/10 of 1% during that month and is up 4.2% from October 1987.

Below are the CPI items reviewed with two percentages listed. The first percentage shows the change during October 1988 and the second figure shows the percentage change for the 12-month period ending October 1988:

All items 0.3%, 4.2%; Housing 0.3%, 3.8%; Fuel/Utilities -0.9%, 2.1%; Food/Beverages 0.2%, 5.2%; Energy -2.2%, 0.1%; Transportation 0.3%, 2.7%; Medical Care Index 0.6%, 6.7%; Physician services 0.4%, 7.2%; Hospital & other related services 1.1%, 10.7%; Hospital room 0.8%, 10.5%; All items, less medical care 0.3%, 4.1% and Personal/Educational.

New manager for Fred S. James

Jack Moore of St. Louis recently joined Fred S. James & Company of Missouri, Inc. as Manager of the Association Group Department.

Prior to joining James, Jack was an Account Executive for the Omni Group in Baton Rouge, LA, who have served Louisiana associations for many years. Jack will work with both the Kansas City and St. Louis James offices, although he will live in St. Louis.

Contact Jack at 1-800/445-9513 if you have any questions regarding MSMA's insurance programs with the James company.

Students honored by AMA

The AMA Division of Membership recently honored Missouri medical students who recruited 1988-89 members through the Medical Student Section Outreach Program.

Students honored include Maria L. Evans, University of Missouri-Columbia; Carole Matteri, St. Louis University and Evan Saunders, Washington University.

Each student received a cash incentive to be used for expenses incurred during the AMA 1988 Interim or 1989 Annual Meeting.

New contract for state medical care plan

New contracts have been awarded for claims processing and utilization review (UR) for the Missouri State Employees' Medical Care Plan. August International will be the new claims administrator and the Sunderbruch Company will be providing UR services.

The new contracts become effective on February 1, 1989. Until then, claims should be submitted in the usual fashion and to the present address. All the current pre-certification and current review procedures should also be followed.

American Medical Television

The American Medical Association will launch American Medical Television (AMT) on Sunday, January 8. The two-hour programming block will air on The Discovery Channel every Sunday from 9:00 a.m. to 11:00 a.m.

Programming for AMT is developed in consultation with medical specialty organizations and leading medical schools. AMT programs carry Continuing Medical Education (CME) credits.

Consult your local cable listings for additional details.

Massachusetts offers AIDS Knowledge Base

The Massachusetts Medical Society through its publishing division known as The Medical Publishing Group (MPG) is offering the **AIDS Knowledge Base**. It is a comprehensive electronic textbook that incorporates the full text of original journal articles, textbook and bibliographic data on all aspects of AIDS. The IBM-compatible software is updated every three months.

For more information, contact Bart Rubenstein, The Medical Publishing Group, 1440 Main Street, Waltham, MA 02154 617/893-3800.

Check it out!

Take a close look at this month's Progress Notes. They have been typeset on the new desktop publishing system purchased by MSMA in December. With the ability to typeset our own copy, the Association will be able to save thousands of dollars on the production costs of the magazine.

One of the advantages of the change is that while saving so much money, we will not be sacrificing superior quality. In fact, you will be challenged to try to find a difference between the pages we typeset and the pages typeset by our printer. **Missouri Medicine** will be produced entirely on the desktop publishing system beginning with the March 1989 issue.

Suspect Medical Liability Insurance Company

Several MSMA members have been solicited for medical malpractice insurance by the Medical Liability Purchasing Group of Jeffersonville, Indiana. The premiums mentioned in their mailing are extremely low.

The Missouri State Division of Insurance has informed us that according to their records, the Indiana Superintendent of Insurance issued a cease and desist order against that company in September 1988. Thay have also informed us that because of this order, this company is not authorized to write insurance policies in the State of Missouri. Read with care any information received.

Health costs jump in 1987

National health care costs climbed to $500 billion -- $1,987 per person -- in 1987, a 9.8 percent increase from 1986, according to a new HCFA report.

Health care consumed 11.1 percent of the country's gross national product (GNP) in 1987, compared to 10.7 percent in 1986. But the hospital portion of the GNP held steady at 4.3 percent, the same as in 1986, while accounting for the largest share of expenses -- 39 percent, or $195 billion. Physician services accounted for 20 percent, or $103 billion.

MI, MR and DD changes

The federal Omnibus Reconciliation Act of 1987 requires that Title XIX certified nursing facilities must not admit on or after January 1, 1989, any new resident who is mentally ill (MI), mentally retarded (MR), or developmentally disabled (DD) unless the Missouri Department of Mental Health has determined prior to admission that the individual needs nursing facility services. The law's intent is to ensure that these special patients are placed in appropriate settings and receive treatment appropriate to their condition.

On December 20, the Missouri Division of Medical Services (DMS) issued a Medicaid Bulletin defining the new pre-admission screening process. Identification of MI, MR, and DD will be made on a new DA-124 C form which is included in the DMS bulletin. Prior to a nursing facility's admitting any new resident, this form must be completed, and must be signed and dated by a physician. If a physician determines that a patient does not meet the DMS definition of MI, MR, or DD, that patient may be admitted to the facility. If diagnosed as MI, MR, or DD, the patient's case will be turned over to the Department of Mental Health for further review and disposition. The new law further states that all residents of Title XIX nursing facilities are to be so screened by April 1, 1990.

Letters to the Editor

Add ACP to specialty list

Dear Dr. Sessions:

Please add our name to the list of Medical Specialty Organizations that appeared on page 437 of the August 1988 Missouri Medicine. Our title should be Missouri Chapter American College of Physicians. The president is J.H. Morris, M.D., 4240 Blue Ridge Boulevard, Kansas City, Missouri 64133. Thank you.

Sincerely yours,
J.H. Morris, M.D., FACP
Governor, Missouri Region ACP
Kansas City, Missouri

Error corrected

Dear Dr. Sessions:

I enjoyed the article "Batting .1000 with Baseball Cards" in the October 1988 issue. Being an avid St. Louis Cardinals fan myself, I am morally compelled, however, to correct an error. I believe that my fellow baseball fans would agree with me that Drs. Perry, Ferris and Doroghazi would prefer to be batting "1.000" rather than ".1000."

Fear not, editors. Even Ozzie makes an error now and then.

Sincerely,
Bill Blanke, MSIII
St. Louis University

HIV exposure in the emergency department

Dear Dr. Sessions:

A recent prospective survey at the Johns Hopkins Hospital revealed a seropositivity rate for human immunodeficiency virus (HIV) of 2/203 (3%) in consecutive critically ill or severely injured patients seen in that emergency department. All the seropositives were trauma patients between the ages of 25 and 34 years, representing 16% of patients in that subset.[1]

The prevalence of HIV in the midwestern United States is probably lower than in seacoast states. Nevertheless, since there is a discernible, albeit low risk to health personnel of seroconversion from exposure to HIV-contaminated blood or body fluids, we recently performed a survey similar to that done in Baltimore, the results of which may be of interest to readers of *Missouri Medicine*.

Between January 23 and July 9, 1988, patients admitted to the Emergency Department of Barnes Hospital, St. Louis, who were judged by triage personnel to have sustained "major" penetrating trauma, were anonymously screened for HIV seropositivity as follows: the label of the tube of clotted blood routinely obtained for blood grouping was annotated with the letters "PT." Upon receipt, blood bank personnel separated a 1 ml serum aliquot which was then labeled only with the age and sex of the patient, thus preserving anonymity. The frozen samples were subsequently tested by one of us (G.S.) using enzyme-linked immunoassay (ELISA). Reproducibly, ELISA-positive samples were re-tested using Western blot analysis. This protocol, which preserved anonymity and therefore did not require informed consent, received prior approval from the Washington University School of Medicine Human Studies Committee.

Results are shown in the Table. The single confirmed positive was in a 28-year-old man. In addition, a 54-year-old, ELISA-positive, woman had an indeterminate Western blot (p24 band only), a pattern that can be seen in early HIV infections or may be non-specific.

This sample size is modest, but confirms that emergency department personnel in Missouri caring for patients with penetrating trauma also have a discernible risk of exposure to blood or body fluids potentially infective for HIV (albeit smaller than the risk recently reported from Baltimore). Such patients, who are often agitated or uncooperative, frequently require basic invasive procedures which must be

Table

	Males		*Females*		*Total*	
Age	+	*Tested*	+	*Tested*	+	*Tested*
10-19	0	7	0	2	0	9
20-29	1	56	0	4	1	60
30-39	0	23	0	4	0	27
40-49	0	3	0	0	0	3
59-59	0	1	0	1*	0	2
≥60	0	2	0	1	0	3
Unknown	0	5	0	1	0	6
Total	1	97	0	13	1	110

* Positive ELISA, indeterminate Western blot (p24 only)
+ = Positive ELISA, confirmed by Western Blot

Continued on page 12

■ Editor's Desk

Continued from page 15

I am often given hand-written notes and I had expected the usual complaint about the nurses or my residents. As I read this standing by her bedside I was touched by the love that this lady expressed. I had a sensation of tightness in my throat and "almost" tears in my eyes. I thanked her and left the room.

It is interesting to examine the condition of being inspired. Inspiration is a curious phenomenon which occurs in an instant and is recognized as a powerful experience. It involves specific body sensations and a simultaneous internal conversation. These appear to be triggered by something someone has done, or said, or written which we see as extraordinary. For instance effective poets have the ability to write in such a way as to recurrently elicit such a response often showing the unusual in the usual.

When we are moved, or touched, or inspired we participate in a conversation in which we are personally reconnected to basic human capacities which we value. These capacities are those which we hold as noble when they are expressed or experienced in a certain way. They include human abilities such as courage, heroism, empathy, compassion, persistence, determination, patience, commitment, creativity, and love. This is observed as a going beyond the usual capabilities, utilizing power that was not ordinarily available, and resulting in an action that was not expected and did not seem possible.

Simultaneously, when we are inspired there are body sensations that occur. For me this includes a tightness in my throat and tears in my eyes. For others it is a lump in the throat, or shivers, or goosebumps. Who can say why this happens when we hear "The Star-Spangled Banner" or see someone who has overcome all odds to win some contest?

When we are inspired the simultaneous internal conversation and body sensations are accompanied by a recognition that something has happened, a shift has occurred, which is ennobling. Interestingly, this is a phenomenon which is specifically unique to the observer. The person who is being inspiring often holds the action as ordinary. They usually do not see themselves as inspirational. On the other hand as observers, we take in the extraordinary action, and hold that action as something of which humans, and thus we, are or could be capable.

Marie was just being herself. She was just a thin little lady with a feeding tube, and a tracheotomy, and not much tongue left, and bad arthritis, and an incredible vitality. What was inspirational was the extra capacity that she utilized to express her love, and her willingness to acknowledge the contributions of others despite the difficulties of her circumstances. In that moment she showed up for me as noble and empowering. It was a magical moment; one that transcends all those complaints about governmental interference, and third party payers, and not enough reimbursement; where patient and doctor dance in such a way that there is only the moment.

How is it that this powerful phenomenon of being inspired with another person somehow opens the possibility for inspiring relationships with others? ■

***Acknowledgment:** *Part of this material derives from a conversation regarding "Inspiration" with Drs. R. Halpern, P. Yaholkovsky, M. Orman, M. Budd, L. Shapiro, D. Beers, and J. Benjamin.*

■ Letters to the Editor

Continued from page 11

performed emergently. Further, epidemiologic projections suggest that the small exposure risk documented here will increase appreciably in the near future in this region of the country.

1. Baker, J.L., et al.: Unsuspected human immunodeficiency virus in critically ill emergency patients. *JAMA*, 257:2609-2511, 1987.

Sincerely,
William W. Monafo, M.D.
Professor of Surgery
Hugh Chaplin, M.D.
Professor of Medicine
and Pathology
Gregory Storch, M.D.
Assistant Professor of
Pediatrics and
Medicine
Washington University
School of Medicine
St. Louis, MO

■ Practice Management

Continued from page 19

Many physicians have a consultant review their superbills to make recommendations and changes before each printing. I think this is a very good idea. It generally saves money by catching errors that otherwise might have gone unnoticed. ■

MSMA

Annual

Meeting

April 13-16

Marriott Pavilion

St. Louis

WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, PIE Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality. PIE Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

Physician Managing Boards, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

Quality Rated Insurance Program: a modified claims-made plan which works in the physician's favor to reward loss-free physicians and provides added protection not available in other policies.

A Financially Sound Reinsurance Program with Lloyd's of London, the world's most prestigious reinsurer.

An Aggressive Defense Team, experienced in all types of medical liability claims and willing to fight for your cause.

If your standards match ours, let's talk business.

The PIE Mutual Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth St., Cleveland, OH 44114
(216) 781-1087

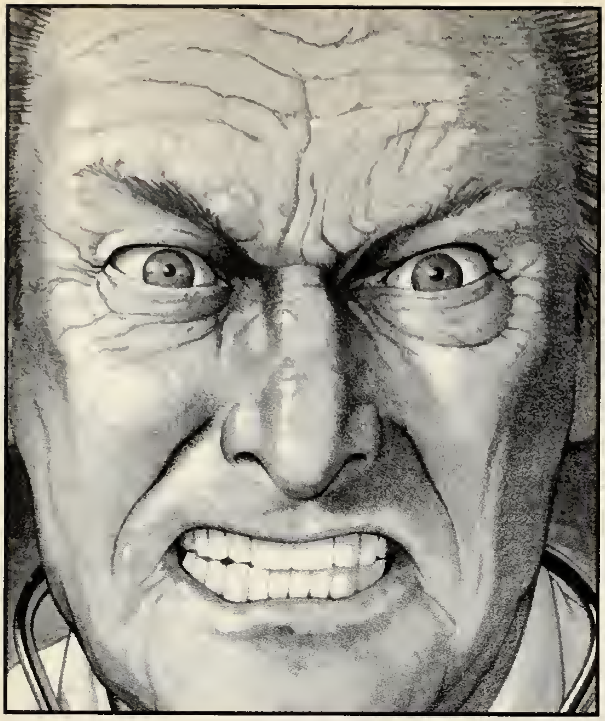
SO WE CAN HOLD THE PREMIUMS DOWN.

LICENSED AGENTS:

FRS & ASSOCIATES
6400 Prospect, Suite 138
Kansas City, MO 64132
(816) 444-6741

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010



A bit upset by limited coverage?

Introducing Increased Aggregate Limits:*

500,000/1,500,000

1,000,000/3,000,000

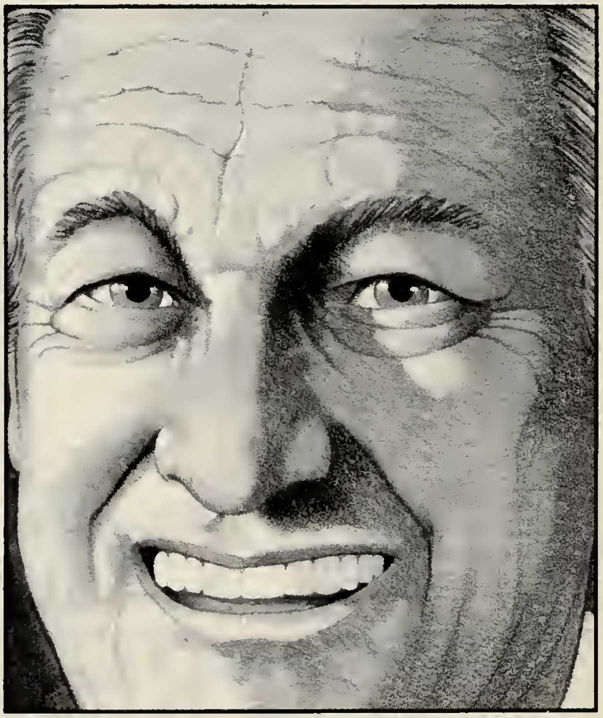
On Claims-Made Coverage.

Established, owned, and managed by physicians, Risk Control Associates is the first company to respond to doctors who are "less than happy" about limited coverage. Introducing new liability limits is just one way we have shown our determination to satisfy the needs of medical professionals. We are also the first, and only, insurer in Missouri to offer: "Million/Million", All Specialties, Occurrence and Claims-Made.

We work hard to ensure that our service and policies are meeting your needs. That's why we provide a wide range of support services like claims management and risk management. And we are constantly seeking to increase and improve our services. We believe that with our combination of expanded coverage and good old-fashioned service we can help alleviate your worries.

*Effective November 1, 1988

So, don't let limited coverage get you *upset*. Come, be a part of the growing family of doctors that choose Risk Control Associates, and smile.



RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURERS

Physicians Helping Physicians

1111 S. Glenstone • Springfield, MO 65804
1-800-422-5122 • 417-862-0650
A Missouri Mutual Assessable Chapter 383 Company

EDITOR'S DESK

by Donald G. Sessions, M.D.

She shoved a small scrap of paper at me. It had some writing on it. "I did this while you were gone," she said.

Being inspired

She was a spare, stooped little lady wearing a red cape and a hand-knitted multicolored tam. There was a permanent twinkle in her eyes. Her right arm hung loosely from her shoulder, the result of previous neck surgery for tongue cancer. Despite an obvious problem with articulation due to multiple excisions of portions of her tongue, she was easy to understand. She had a powerful vitality in spite of her worn-out body. A recent biopsy showed a deeply infiltrating cancer recurrence, her fourth, in the remnant of her tongue. She was scheduled for elective tracheotomy and catheter placement for irradiation implants and hyperthermia treatments.

It turned out that I would not be able to do her surgery because I was to have elective hernia surgery myself. When I discussed this with her she was pleased that I had been able to arrange for one of my partners to do her surgery. She was really more interested in my impending surgery than hers. She had undergone this type of operation before and it had not been successful. "Remember, don't strain yourself reaching out and up," she said, complete with hand and arm motions, "as well as lifting. That was my mistake."

Ten days later after my "minor" surgery, (that's another story), I visited her in her hospital room. A feeding tube was taped to her forehead. Her implant catheters had been removed and her tracheotomy was still in place. She had learned to block the opening of the tracheotomy tube with her finger so she could talk but occasionally she would forget and still she was able to be heard. She shoved a small scrap of paper at me. It had some writing on it. "I did this while you were gone," she said. The handwriting was like my grandmother's:

To Dr. Sessions

There are good doctors in every town
Some famous, family, some of renoun.

But one who for me, has passed every test
Is Dr. Donald Sessions the dearest and best.

He's thoughtful and kind; his friendly smile
Assurance brings that life is always worthwhile.

When there are risks, tells what's at stake
Decides the very best option to take.

To learn the latest in methods new
Seminars in Cal and New York too.

And so dear God, in thy tender care
Give him good health and friends to share.

A home of love, of rest and peace
A quiet nook, his cares release.

Free of worries, pain, and harm
Enfolded in thy loving arms.

I've come the road that he must trod
Enrich his faith and hope in God.

Marie Jett Hussey
Oct. '88

Continued on page 12

A Medic Computer System Located Hundreds Of Unpaid Medical Bills.

And Not By Accident.

It's true. When a Medic Computer System replaced another in one large practice, it found thousands of dollars in bills never sent and insurance claims never filed.

Medic can help solve your cash flow problems just as easily. Since each transaction has a unique number, payments are easy to track. Our Aged Accounts Receivable Report will list overdue accounts by any amount or time frame you choose. And our Aged Insurance Claims Report even calculates the number of days since a claim was filed. So you can act before a bill gets too large or a claim gets too old.

Medic's already at work in more than 2,000 practices from coast to coast. And more than 6,000 physicians enjoy the security of a system backed by a $2.5 billion organization. Plus Texas Instruments hardware, a leader in expandability, compatibility and reliability. That makes Medic the system you can start with and stay with.

So choose a system that will turn your bottom line around. Call Medic. The specialists in computer systems for America's medical community.

Texas Instruments
Computer Products
Authorized Sales

Please tell me how Medic Computer Systems can help my practice
Name ______
Address ______
City ______ State ______ Zip ______
Phone ( ) ______ Number of physicians in practice ______
Specialty ______

Medic Computer Systems
8601 Six Forks Rd., Suite 300, Raleigh, NC 27615

medic
computer systems

8601 Six Forks Rd., Suite 300, Raleigh, NC 27615, 919-847-8102. In NC Call: 1-800-877-5678. Outside NC Call: 1-800-334-8534.
Other Offices: Ann Arbor, Atlanta, Austin, Chicago, Cincinnati, Dallas, Denver, Ft. Lauderdale, Hartford, Houston, Jackson, Kansas City, Los Angeles, Minneapolis, Nashville, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Richmond, San Antonio, San Diego, San Francisco, Tampa.

Auxiliary Message

by Barbara Gentry
MSMF Chairman

To date, the Foundation has supplied 2,600 loans totaling more than $2.5 million, to 1,205 future physicians.

Auxiliary supports MSMF

In 1960, the Missouri State Medical Foundation (MSMF) was established to assist Missourians attending AMA-approved medical schools throughout the nation. The 1988 loan package of $134,500 assisted 81 medical students. To date, the Foundation has supplied 2,600 loans totaling more than $2.5 million to 1,205 future physicians. The program's default rate is exceptionally low.

To qualify for an MSMF loan, full-time students must be working toward an M.D. degree and must have successfully completed one year of medical school. Students in six-year medical schools are required to have successfully completed the first two years of the program. Loans are based on financial need with consideration given to the student's background, references, academic achievement and other factors. The decision to grant a loan rests with the MSMF Loan Committee. Unique to the MSMF program is the fact that loans are disbursed directly to the student who may use the money for books, tuition, fees, equipment, or living expenses.

The majority of Foundation loan recipients are attending one of Missouri's four medical schools (tuition costs per year are listed in parentheses): St. Louis University ($17,000); University of Missouri-Columbia ($7,025); University of Missouri-Kansas City ($8,600) and Washington University ($13,400).

Throughout the year, MSMA Auxilians help support the Foundation with fundraisers. Eileen Dyer, MSMAA president, and Pattye Barbee, MSMAA president-elect, are taking throughout the state a beautiful afghan handcrafted by Janet Campbell. MSMA members and auxilians may purchase tickets for a drawing to be held at our Annual Convention in St. Louis in April. All donations go to the Foundation and some lucky person will take the afghan home from St. Louis!

In addition, memorial contributions, the Holiday Sharing Card (see page 777, December 1988 *Missouri Medicine*) and county fundraisers also benefit the Foundation.

If you want to help Missourians complete their medical education, please support your local Auxiliary fundraiser or send your donation to: MSMF, P.O. Box 1028, Jefferson City, MO 65102. ■

In ten years your malpractice carrier may be just a memory.

ROFESSIONAL
LIABILI
INSU
C

Unless it's Medical Protective.

The most important thing an insurance company sells is its promise to be here when you need help. Unfortunately, that's a promise that's easy to make, but hard to keep.

When you consider liability insurance, remember this. A company that's survived tough times before is more likely to come through a crisis period. And no company has weathered more of the industry's tough times than The Medical Protective Company because we pioneered professional liability coverage nearly a century ago.

For more information contact your Medical Protective Company general agent. He'll be here when you need him.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Ralph E. Borgmann, Philip E. Moppert
Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400

Thomas E. Meierant, Gregory Sherar
Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

AIM HIGH

READY FOR A CHANGE OF PACE?

The Air Force has openings for **Physician Specialists**. You can enjoy better working hours, 30 days of vacation with pay each year and a unique and enjoyable life-style for you and your family while serving your country. Ask a health professions recruiter about our outstanding pay and benefits package. Call

CAPT EARL THOMPSON
STATION TO STATION COLLECT
314-434-9555

AIR FORCE

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
% Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

Although your name will **not** *be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Dear Dr. Woerth,

I obtained a copy of the Level II and III HCPCS codes. After leafing through each and every page, neither my office manager nor I could find a code for a surgical tray. Is there such a code?

Also, I frequently do minor procedures in the office such as an excision or foreign body removal which requires an abbreviated version of my standard surgical tray. Is it possible that I would thus have two different charges for surgical trays depending on the type I used?

Dr. C.E.

Dear Dr. C.E.,

The HCPCS code for a surgical tray is found in Level II and is code A4550. Because of your circumstances that require two or more types of surgical trays, it would be appropriate for you to establish a separate fee for each type of surgical tray. The cost of each surgical tray is determined by the supplies included on the tray. Once the cost of each type of surgical tray is established, keep a record of how this cost was derived in case of an audit.

For reusable instruments included on the surgical tray, the cost of the instruments is amortized against the life of the instrument. For example, if an instrument costs $50 and can be used 20 times, it would be included as a $2.50 expense in determining the cost of the tray. ■

Dear Dr. Woerth,

We will soon be printing new superbills (also called encounter forms or fee sheets). What do you recommend for inclusion in an effective and efficient superbill?

Dr. S.O.

Dear Dr. S.O.,

It will vary with the medical specialty as to what should be included on a superbill. There are, however, general recommendations that I can make regarding superbills.

1. Print only a one year supply of superbills at a time. Each year many procedural codes (CPT and HCPCS Level II and III) are changed, deleted or new ones added. If you are using superbills that have codes that have been deleted or that do not have new codes, then your third party reimbursements may suffer.

2. The more general your medical practice, the wider the range of codes for office and hospital medical services that need to be listed on the superbill, i.e., brief, limited, intermediate, etc. levels of service. Physicians tend to bill for only the level of services listed on their superbill. An insurance company is more likely to audit a physician when he/she is only billing for one or two levels of medical/hospital services. Thus, I encourage my clients to list all levels of office and hospital medical services on their superbills and use them appropriately.

3. Unless your medical practice is highly specialized and thus uses the same few diagnoses throughout the day, I suggest that diagnostic codes be excluded from the superbill. To effectively code a patient's diagnosis, codes need to be complete.

For example, fourth and fifth digits of ICD-9 diagnostic codes need to be used when appropriate. Codes also need to be correctly sequenced. Generally, superbills do not lend themselves readily to accurate diagnostic coding.

4. Codes that represent starred procedures in CPT need to be starred on the superbill so that adjunct codes are appropriately used.

Continued on page 12

YOCON®

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

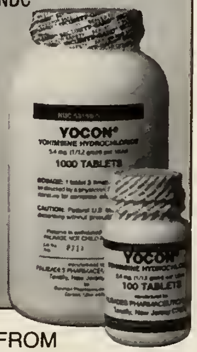
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES
PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
3609 NE 62nd Terrace
Kansas City, MO 64119
816-455-3400

Amount of insurance $ ____________________

Date of Birth ____________________

Smoker/Non-Smoker (circle one)

Name ____________________

Address ____________________

City/State ____________________

Zip ____________ Phone ____________

Special Article

Physician Stress: Is It Inevitable?

Morton C. Orman, M.D.

Stress (i.e. distress) among physicians is a problem of increasing public and professional concern. Prevalence rates of suicide, drug abuse, marital problems, and psychiatric disorders have all been reported to be higher in physicians than in the general population as a whole.[1-5] Countless other physicians who are not impaired are nevertheless deeply dissatisfied with many aspects of their work.[6] Feelings of frustration, anger, and resentment appear to be rising among practicing physicians, and such feelings may be adversely affecting the quality of patient care, the stability of physicians' home and family lives, and the incidence rates of malpractice litigation.[7-9]

Prevailing Causal Beliefs

It is commonly believed that the demands and complexities of medical practice, coupled with recent changes in the social, political, and economic climate of medical care, are the primary causes of increasing physician stress. McCue has argued that physicians regularly encounter stressors that are "intrinsic" aspects of medical practice.[10] Others believe that factors such as excessive work loads, time pressures, increasing financial costs, burgeoning paperwork, information overload, fear of mistakes, social isolation, sleep deprivation, treatment failures, and lack of perceived support by regulating and peer review agencies are primarily responsible for physician stress.

Most articles endorse these causal assumptions. They present a pessimistic view of the problem and offer little hope for relief. In this article, I will challenge these assumptions and suggest that physicians do have the ability to prevent or eliminate most of the stress (i.e. distress) that they might encounter in both their personal and professional lives.

As an internist who specializes in the treatment of stress and stress-related disorders, I have counselled numerous physicians, nurses, dentists, administrators, and other health care professionals who were experiencing high levels of stress and tension in their lives. Contrary to prevailing beliefs, their stress was not primarily caused by external pressures or demands, nor was it an inevitable consequence of the social, political, or economic forces which they encountered. Instead, the vast majority of their stress resulted from internal cognitive and behavioral tendencies, of which they were largely unaware. Once they learned to recognize and effectively cope with these non-obvious factors, many of these professionals discovered that they could prevent or eliminate most of the stress (i.e. distress) that they were experiencing.

Based on my own and others' clinical experience, therefore, I have found that stress (i.e. distress) is never an inevitable or unavoidable aspect of medical practice. Conclusions to the contrary have largely resulted from the fact that the causes of physician stress have previously been incorrectly understood.

External Demand Hypotheses

Hans Selye, the Canadian endocrinologist who is acknowledged as the "father of modern stress research," believed that stress is an inevitable biological response to external physical and psychosocial demands that are regularly placed upon living organisms.[11] Researchers in the 1940s and 1950s adopted this external demand hypothesis, and subsequent laboratory and epidemiologic studies appeared to confirm an association between external demands ("stressors") and internal physiologic and emotional responses ("stress responses").

Morton C. Orman, M.D. is a board-certified internist in private practice in Baltimore, Maryland. He is Director of the Behavioral Medicine and Biofeedback Referral Center in Maryland, where he is also an attending physician at Mercy and St. Joseph's hospitals.

Address for requests and other communications: 2936 East Baltimore Street, Baltimore, Maryland, 21224.

In the 1960s and 1970s, however, Selye's external demand hypothesis came under widespread criticism and attack. Behavioral and social scientists pointed out important differences between the causes of stress in human beings and the causes of stress in animals and mechanical systems. Previous conditioning, personality differences, patterns of perception, and other cognitive and behavioral factors were found to be responsible for much of human stress, and for the wide degree of variability that human beings exhibit in their individual responses to external situations and events.[12]

Individual coping skills and stress-buffering resources are other factors that were subsequently added to the stressor-stress equation. Kobassa and her colleagues, for example, identified a stress-resilient personality type which they call "hardiness," and which appears to enable certain people to experience little stress-related illness, despite exposure to high levels of external pressures and demands.[13]

Thus, a more modern view of human stress suggests that it is not so much what is happening outside of us that causes us to experience stress, but rather it is how we consciously or unconsciously relate to whatever happens and to the many complexities, demands, and challenges that our environment presents. Given this perspective, it seems prudent to assume that the greater part of physician stress is self-induced, owing to specific stress-generating and stress-maintaining ways in which physicians typically relate to personal and professional stressors in their lives.

Characteristics of Physicians that Contribute to Excessive Stress

Personality and character traits of physicians as a group have been widely studied and reported.[14-17] Prominent among these are tendencies toward perfectionism, rigidity in thinking, compulsiveness, skepticism, denial of personal problems and weaknesses, self-sacrifice, and a strong need for interpersonal dominance and control.

I have found that these cognitive and behavioral tendencies — not the external demands of medical practice — are primarily responsible for the majority of stress (i.e. distress) in physicians and other health professionals whom I have treated in my clinical practice. More importantly, once individuals become aware of the role these self-determined factors play in the genesis of their difficulties, they are often able to make significant adjustments in their habitual patterns of perceiving and acting. As a result of such interventions, I have personally seen physicians and other health care professionals successfully reduce or eliminate most of the stress (i.e. distress) in their lives without the need for drastic changes in their social, political, or economic environments, and without the need for practicing daily relaxation exercises or other time-consuming stress management techniques.

By learning to recognize these "internal" factors, we, as physicians, can become much more effective at dealing with four major areas of stress that we frequently encounter: 1) malpractice stress (including both the fear of being sued and the stress that often follows being sued); 2) the rapidly changing financial climate of contemporary medicine; 3) the changing nature of the doctor-patient relationship; and 4) stress in our personal and family lives. For each of these areas, I will highlight some of the more important cognitive and behavioral tendencies which I believe are responsible for needless suffering and impairment among physicians, and which are within the direct personal control of each and every one of us.

The Fear of Being Sued and the Malpractice Stress Syndrome

Malpractice suits against physicians have been rising at an unprecedented rate.[18] The fear of being sued, as well as the social, physical, and emotional consequences of the litigation process, has severely eroded our sense of security and "piece of mind." In fact, physicians' (and other health professionals') emotional and behavioral responses to being sued are so well-documented that they have recently become designated as the "Malpractice Stress Syndrome."[19] While it is unlikely that the malpractice crisis will lessen in the near future, there is much that we can do to reduce our chances of being sued or to cope effectively should such an event occur.

Recent efforts to reduce the incidence of malpractice suits have focused upon the role of doctor-patient communication and relationship problems in the genesis of such claims.[20-21] Doctors who are arrogant, hostile, insensitive, or oblivious to their patients' emotional needs and concerns are believed to be at higher risk of being sued. Doctors who are compassionate, empathetic, caring, and freely communicative with their patients, on the other hand, are believed to be at a lower risk for malpractice claims, even when similar types of untoward events occur as they might for other practitioners.

While caring, compassionate, and good-communicating physicians are not immune from being sued, the insensitive or poorly-relating physician is asking for trouble in today's litigious society. Unfortunately, such people are least-likely to admit to having interpersonal difficulties, nor are they likely to seek remedial help or training. Many other physicians, however, are beginning to enroll in communication and doctor-patient relationship courses. They are beginning to appreciate the value such programs can have, not just in the area of malpractice prevention, but in attracting new patients to their practices, retaining established patients, and helping to reduce interpersonal conflicts in other areas of their lives. In addition, some malpractice carriers are considering premium reductions for physicians who successfully complete such training programs.[22]

Physicians also need not suffer intense personal distress or humiliation if they happen to be sued. Physician support groups and counselling services are now available in many states. The Center For Professional Well-Being, a national organization headed by Dr. John-Henry Pfifferling, provides individual counselling for physicians with malpractice stress, and promotes preventive training programs for health professional groups as well.[23]

Again, it is not being sued itself that primarily determines the degree of malpractice stress we experience, but rather it is the way we relate to being sued (i.e. our cognitive and behavioral responses) that makes the greatest difference. For example, Charles has shown that physicians tend to over-react emotionally to the knowledge that they have been sued.[24] Many tend to isolate themselves from sources of support, such as family, friends, and peers. They also attempt to cope with their feelings and emotions on their own, instead of reaching out for professional help or counselling. Physicians who overcome their initial feelings of embarrassment, humiliation, shame, and anger, however, and who do seek out help from support groups or other sources often experience much less stress during the litigation process (which in many cases can last for years), and they often return to their previous level of confidence, enthusiasm, and personal and professional satisfaction.[25]

Dealing with the Changing Financial Climate of Contemporary Medicine

Many physicians are concerned, worried, and angry about the rapidly changing financial climate of modern medicine. Physicians in fee-for-service practices are losing patients to prepaid, restricted-access insurance plans. Many physicians have reluctantly agreed to participate in reduced-reimbursement programs to keep from losing additional patients. Medicare, state-funded medical assistance programs, and other third-party payers have limited physician charges and reimbursements, and in some cases have even reduced payment levels for major services. At the same time, the costs of materials, salaries, benefits, insurances, and other expenses of operating a medical practice have steadily escalated. In addition, medicine is becoming increasingly "consumerized" and many physicians are being forced to adopt a "businessman" mentality, which often conflicts with their previous single-minded commitment to provide the best possible care and professional service.[26-27]

Despite these profoundly disturbing economic trends, physicians need not experience excessive stress (i.e. distress) in the face of them. We must face the fact that progressive increases in our incomes will not come as easily as in the past. Many of us will need to concentrate more heavily on attracting new patients and improving the level of personalized service, educational services, and other benefits that we provide to existing patients. Some of us may even choose to accept a lower level of income to preserve the style and form of practice that we find most satisfying and rewarding. And most importantly, in my opinion, we must staunchly refuse to allow a "businessman" mentality to dominate our thinking and behavior, and to supersede our commitment to our patients' interests and well-being.

The physician who rigidly holds on to memories of "the way things used to be" or who fails to respond to today's changing economic realities with flexibility, creativity, and a sense of professional challenge will likely experience high levels of stress (i.e. distress) in the future. Similarly, physicians who allow financial concerns and inducements to compromise their professional integrity and their commitment to doing the best they can for each and every patient will likely pay a steep "price" in terms of both personal and professional satisfaction.[28]

Dealing with the Changing Nature of the Doctor-Patient Relationship

In the past, being a physician meant that we automatically received the respect, the trust, and the cooperation of our patients. People looked up to us, admired us, and often surrendered themselves willingly and unquestioningly to our recommendations, explanations, and advice. Today, however, the nature of the doctor-patient relationship has undergone profound and far-reaching changes.[29] While doctors are still highly respected in our society, there has been a noticeable erosion of physician trust and a greater demand for self-determination and self-control from our patients. At the same time, bureaucratic and fiscal policies have resulted in a loss of the professional autonomy and control that we once enjoyed. Patients now receive medical information and advice not primarily from their doctors, but from television, radio talk shows, popular magazines, daily newspapers, and other arms of the media. The image of the physician as omnipotent, all-knowing, and paternalistic caretaker is no longer valued by the public, and those of us who refuse to accept this fact are likely to experience high degrees of stress and tension in our work.

To cope successfully with today's changing doctor-patient relationship, physicians must be willing to be flexible, adaptable, and responsive to changing patient needs and desires. While our commitment to excellence in diagnosing, treating, and preventing human illness need not be altered, the way we try to accomplish these goals with our patients must be continually updated and revised. We must accept our loss of autonomy and control with a sense of grace and opportunity. We must recognize our tendencies to become dogmatic, paternalistic, and domineering and learn how to modify these when they are not needed. We must learn how to tolerate uncertainty and help our patients do the same. We must learn how to generate trust in our relationships and how to deal with distrust when this emerges. We must learn how to create cooperative partnerships with our patients and how to become more personally involved in their lives. And most importantly, I believe, we must maintain our commitment to competent and compassionate caring, regardless of the social, economic, and political climate that exists at any point in time.

Few of these skills are taught to us in our medical training. They can be learned and continually improved, however, provided that we have the desire to do so. In my experience, those physicians who graciously accept profound changes in the traditional and time-honored doctor-patient relationship experience little difficulty (or stress) in creatively adapting to them. It is the physician who continues to long for the "good old days" or who actively fights against the tide of public sentiment that suffers the greatest degree of personal and professional distress. In addition, once physicians are able to identify the central role that they themselves play in creating unsatisfying patient interactions, and once they stop blaming bureaucrats and their patients for being the cause of their suffering, they are able to make important cognitive and behavioral changes that are simultaneously relationship-enhancing and stress-relieving.

Dealing with Stress in One's Personal and Family Life

Family conflicts and tensions are significant aspects of the problem of physician stress. Retreat from family life and over-immersion in one's work are characteristic response patterns of physicians under stress.[30-31] Evidence suggests that almost 50% of physicians have unsatisfactory or troubled marriages.[32-33] And some studies suggest that physician's wives may have a greater incidence of alcoholism and drug dependence than the average American woman.[34-35]

The problems of "overwork" and interruptions in family activities are commonly believed to be primary causes of physician marital and family stress. Maddison and others, however, have argued that the syndrome of "overwork" should be viewed as a symptom, and not as a cause, of physician stress.[36-38] Many doctors try to cope with increasing feelings of guilt, aggression, and unfulfilled dependency needs by compulsive over-involvement in their work.[39] By failing to identify and effectively deal with the cognitive and behavioral tendencies which underlie such problems, these compulsive coping strategies often make matters worse rather than better.

On the other hand, "appropriate" involvement in one's work as a physician (as opposed to excessive or compulsive over-involvement) is often resisted and resented by both the practitioner and his or her family members. Sociologist Ernest Greenwood comments upon this necessary acceptance of intrusions, emergencies, and personal inconveniences as follows:

> "In the professions, one's absorption in one's work is complete. . . . It is a personal involvement which influences the after work life and causes the line between work hours and leisure hours to disappear. To such a person, his work is his life. Family members must somehow learn to cope with this fact."[40]

The line between inappropriate and appropriate involvement in one's work may appear difficult to draw, but the personal experiences are easily distinguishable. The former is usually characterized by frustration, dissatisfaction, emotional and physical exhaustion, and strained interpersonal relationships, while the latter is often accompanied by enthusiasm, contentment, and a shared sense of pride, accomplishment, and support within one's family.

Thus, it is often a physician's cognitive and behavioral makeup, rather than the demands of medical practice, that appear to be the major causes of marital and family stress. Bittker noted that "the self-denial required by the rigors of training reinforces a behavioral pattern that most physicians must actively unlearn in order to achieve a satisfying personal life."[29] Our tendencies to be obsessive, controlling, and authoritarian in our relationships with patients often carries over into our relationships with other people, including our spouses and children. Perfectionistic expectations of ourselves can lead to anger and frustration when others fail to maintain such idealistic standards. Our tendency to deny the existence of both personal and interpersonal problems, coupled with our reluctance to ask for help when early signs of marital discord appear, almost certainly contributes to further difficulties. In short, as Roeske has pointed out, those characteristics and tendencies of "physicianhood" which we tend to value as assets can also lead to impairment and distress in many areas of our personal and professional lives.[30]

Summary and Conclusions

Early attempts to understand the causes of physician stress focused almost exclusively upon the role of external stressors and demands. Recent psychosocial and behavioral research, however, suggests that individual attitudes, beliefs, personality factors, and learned coping strategies probably play a more important role. In addition, such cognitive and behavioral tendencies are within the control of each individual, and clinical experience has shown that these factors can indeed be modified.[31]

Freudenberger noted that most health professionals who are experiencing high levels of stress fail to identify the role that they themselves play in generating such symptoms.[32] Instead, they tend to blame others as the cause of their problems and tend to react cynically toward suggestions that they could benefit from help. A large-scale study of family physicians in North Carolina, conducted by May, Revicki, and Jones in 1983, confirmed the fact that most physicians who reported a high level of professional stress also tended to score high on measures of external locus of control — i.e. the perception that external or environmental factors are mainly responsible for one's problems or successes.[33]

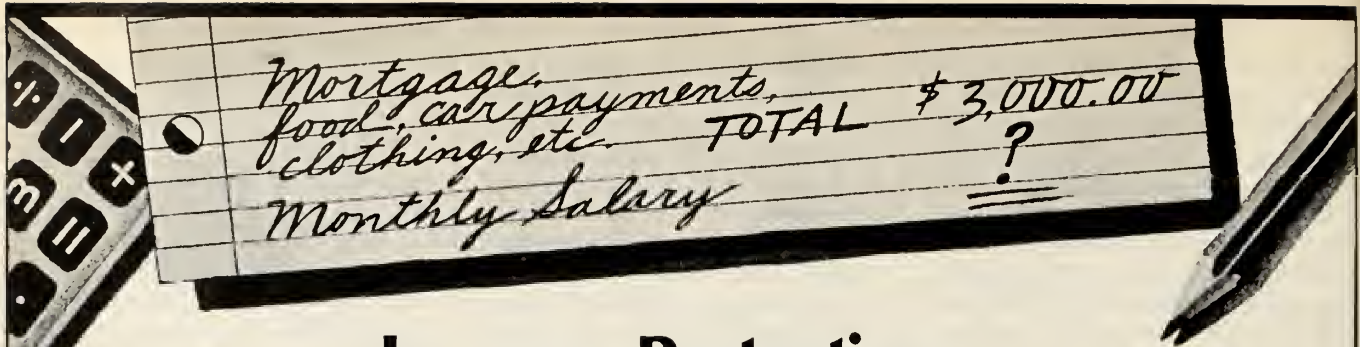
My own experience in treating physicians and other people with stress tends to confirm these findings. More importantly, I have found that once individuals are helped to identify the role that their own cognitive and behavioral tendencies play in the origin of their stress, they can usually bring about impressive reductions in stress and tension without significant changes in environmental factors or demands.

While many people advocate stress-releasing and other relaxation skills for physicians, I have found that such approaches are often counterproductive. They reinforce the notion that environmental stressors are primarily responsible for the problem and lend credence to the mistaken assumption that stress is an inherent and unavoidable aspect of medical practice. This, in turn, discourages physicians from examining the role that their own cognitive and behavioral tendencies play in their problems, and from taking decisive action to identify and modify these patterns.

I believe that we, as physicians, should consider the presence of stress in any area of our lives as a type of useful feedback signal that indicates the need for greater adaptability, flexibility, and self-awareness. I have found that when I adopt such a salutologic (as opposed to pathologic) framework in my own life, and when I avail myself of the wealth of professional support which abounds around me, I can almost always identify stress-promoting cognitions and behaviors that are totally within my personal control. I have also found that most other physicians and health professionals are capable of doing the same, and that when our natural human capacities for self-observation and self-correction are properly utilized, we can learn to reduce or eliminate the vast majority of stress and tension that we may be experiencing in both our personal and professional lives. ■

References

1. Ross M: Suicide among physicians. *Psychiatry in Med* 1971;2:189-198.
2. Ross KD, Rosow I: Physicians who kill themselves. *Arch Gen Psychiatry* 1973;29:800-805.
3. Modlin HC, Montes A: Narcotics addiction in physicians. *Am J Psychiatry* 1964;121:358-365.
4. Vaillant GE, Sobowale NC, McArthur C: Some psychologic vulnerabilities of physicians. *N Engl J Med* 1972;287:372-375.
5. Scheiber SC: Emotional problems of physicians: 1. nature and extent of the problem. *Ariz Med* 1977;34:323-325.
6. Mawardi BH: Satisfactions, dissatisfactions, and causes of stress in medical practice. *JAMA* 1979;241:1483-1486.
7. Rubin W (Ed.): Survey shows increasing unhappiness of internists. *Internal Med News* 1988;21:1.
8. May HJ, Revicki DA, Jones JG: Professional stress and the practicing family physician. *Southern Med J* 1983;76:1273-1276.
9. Bartlett, EE: What's up doc? — the patient and the malpractice suit. *Risk Management* 1987;Aug:26-31.
10. McCue JD: The effects of stress on physicians and their medical practice. *N Engl J Med* 1982;306:458-463.
11. Selye H: *The Stress of Life*. New York, McGraw Hill, 1956.
12. Gentry WD (Ed.): *Handbook of Behavioral Medicine*. New York, Guilford Press, 1984.
13. Maddi SR, Kobasa SC: *The Hardy Executive: Health Under Stress*. Chicago, Dorsey Prof Books, 1984.
14. Vaillant GE, Sobowale NC, McArthur C: Some psychologic vulnerabilities of physicians. *N Engl J Med* 1972;287:372-375.
15. Gabbard GO: The role of compulsiveness in the normal physician. *JAMA* 1985;254:2926-2929.
16. Bittker TE: The distressed physician: where do we go from here? *Arizona Med* 1978;35:469-472.
17. Roeske N: Stress and the physician. *Psychiatric Annals* 1981;11:245-258.
18. Charles SC, Kennedy EC: *Defendant: A Psychiatrist on Trial for Medical Malpractice*. New York, Random House, 1986.
19. Reading EG: The malpractice stress syndrome. *NJ Med* 1986;83:289-90.
20. Valente CM, Antlitz AM, Boyd MD, Troisi AJ: The importance of physician-patient communication in reducing medical liability. *Maryland State Med J* 1988;37:75-78.
21. Bartlett, EE: What's up doc? — the patient and the malpractice suit. *Risk Management* 1987;Aug:26-31.
22. *Bulletin of The Society For Professional Well-Being*. 1988;1(1):1.
23. For more information, contact Dr. John-Henry Pfifferling, Director, Center For Professional Well-Being, 5102 Chapel Hill Boulevard, Durham, North Carolina, 27707, (919) 489-9167.
24. Charles SC, Wilbert JR, Franke KJ, Lichtenberg, R: Sued and nonsued physicians' self-reported reactions to malpractice litigation. *Am J Psychiatry* 1985;142:437-440.
25. Wilbert JR, Charles SC, Warnecke RB: Coping with the stress of malpractice litigation. *Illinois Med J* 1987;171:23-27.
26. Relman AS: Practicing medicine in the new business climate. *N Engl J Med* 1987;316:1150-1.
27. Bock RS: The pressure to keep prices high at a walk-in clinic: a personal experience. *N Engl J Med* 1988;319:785-787.
28. Scovern H: Hired help: a physician's experiences in a for-profit staff-model HMO. *N Engl J Med* 1988;319:787-790.
29. Gitnick G (Ed.): Patient autonomy eliminates a role for paternalism in the doctor-patient relationship, in Gitnick G (Ed.): *Debates in Medicine, Volume 1*. Chicago, Year Book Med Publishers, 1988.
30. Pearson MM, Strecker, EA: Physicians as psychiatric patients, private practice experience. *Am J Psychiatry* 1960;116:915-919.
31. Fine C: *Married to Medicine: An Intimate Portrait of Doctor's Wives*. New York, Athaeneum, 1981.
32. Maddison D: Stress on the doctor and his family. *Med J Australia* 1974;2:315-318.
33. Vaillant GE, Sobowale NC, McArthur C: Some psychologic vulnerabilities of physicians. *N Engl J Med* 1972;287:372-375.
34. Lorch BD, Crawford LE: Marriage to a physician: the stresses and responsibilities. *Colo Med* 1983;80:84-86.
35. Fine C: *Married to Medicine: An Intimate Portrait of Doctor's Wives*. New York, Athaeneum, 1981.
36. Maddison D: Stress on the doctor and his family. *Med J Australia* 1974;2:315-318.
37. Pearson MM, Strecker, EA: Physicians as psychiatric patients, private practice experience. *Am J Psychiatry* 1960;116:915-919.
38. Ellard J: The disease of being a doctor. *Med J Australia* 1974;2:318-323.
39. Walker JI: Coping with the stress of medical practice. *Conn Med* 1981;45:593-596.
40. Greenwood E: Attributes of a profession, in Pavalko RM (Ed.): *Sociological Perspectives on Occupations*. Itasca, Illinois, F. E. Peacock, 1972.
41. Bittker TE: The distressed physician: where do we go from here? *Arizona Med* 1978;35:469-472.
42. Roeske N: Stress and the physician. *Psychiatric Annals* 1981;11:245-258.
43. Roeske N: Stress and the physician. *Psychiatric Annals* 1981;11:245-258.
44. Friedman M, Ulmer D: *Treating Type A Behavior and Your Heart*. New York, Alfred A. Knopf, 1984.
45. Freudenberger H: Burnout: occupational hazard of the child care worker. *Child Care Q* 1977;6:90-99.
46. May HJ, Revicki DA, Jones JG: Professional stress and the practicing family physician. *Southern Med J* 1983;76:1273-1276.



Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance
programs offer you coverage and
cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: James

FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______________________________

Address ______________________________

City ______________ State ____________ ZIP ____________

Phone: (   ) ______________ Best time to call: ____________

Serving MSMA
Since 1943

Continental Insurance.℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

Hepatitis A

Analysis of a Community Outbreak

Warren C. Lovinger, Jr., M.D.
Nevada, Missouri

The 1987 outbreak of hepatitis A in the Southwest Missouri town of Nevada illustrates a number of public health measures that can quickly and effectively halt an epidemic. Cooperation among state health officials, individual physicians and the news media is just one aspect of the control of such an outbreak.

Hepatitis A, also known as "viral hepatitis" or "infectious hepatitis," is a viral illness that is endemic in most parts of the world. In the United States, it usually occurs in fall and winter as sporadic outbreaks among previously unexposed children and young adults. It is caused by the hepatitis A virus (HAV), which is a 27 nm RNA enterovirus (Type 72). It is present in the stool, bile, liver, and blood of those who are in the late incubation and preicteric phases of acute illness. During these phases, infected persons are likely to transmit the virus to others by the "fecal-oral route," i.e. when their stool-soiled hands touch food or other materials that are subsequently put in the mouth of a susceptible person. Parenteral spread by serum-to-serum contact is possible, but apparently uncommon.

Once a person has had an HAV infection, he develops lifelong immunity by forming anti-HAV antibody. The antibody appears early in the infection as an IgM antibody, but is predominantly an IgG antibody in later months and years. Administration of immune globulin (IG) provides approximately three months of passive protection against hepatitis A by supplying anti-HAV antibody from the pooled serum of donors. In developing countries, exposure, infection and subsequent immunity to hepatitis A is almost universal in childhood.[1] However, in the United States, only 40% of urban dwellers have previously had hepatitis A, as demonstrated by the presence of anti-HAV antibody in their serum. The incidence of past infection does increase with age, as almost 80% of Americans over age 50 have anti-HAV, and are thus immune to repeat illness.

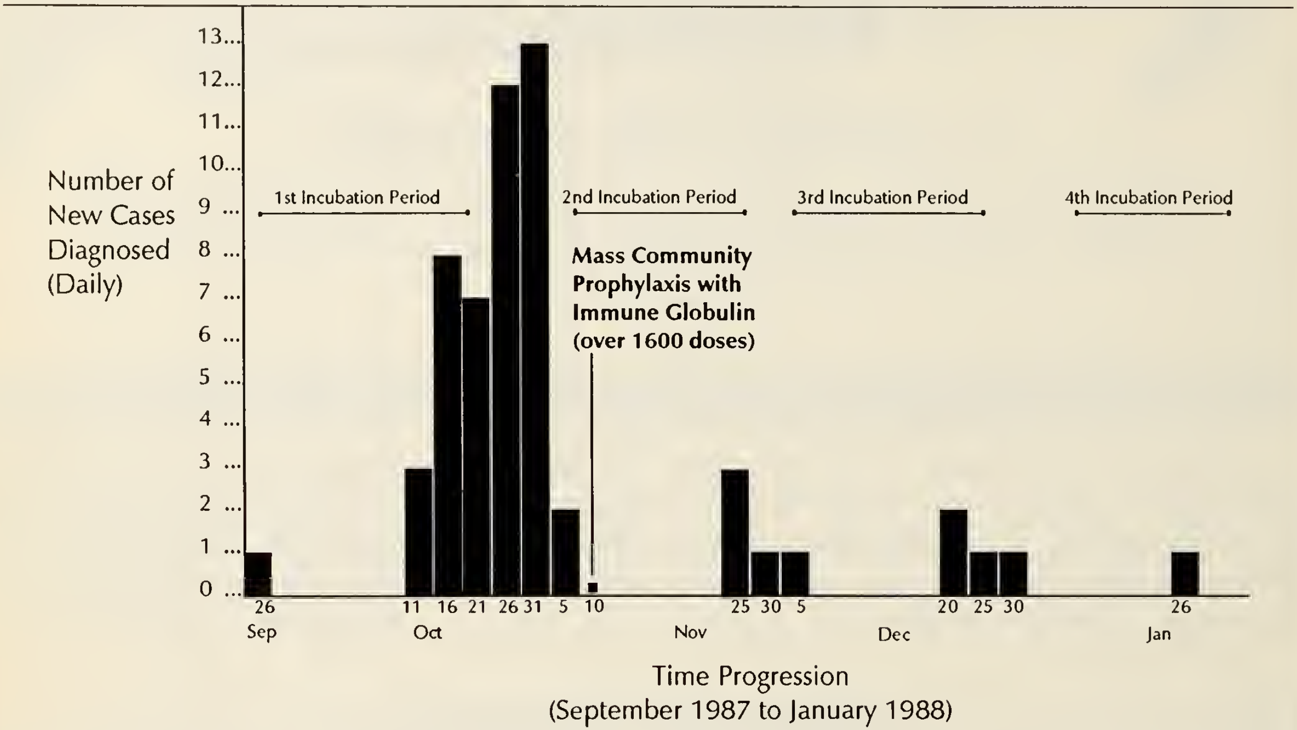
Interestingly, only 5% of those who are positive for anti-HAV antibody can recall having had diagnosed hepatitis. The majority of persons have had a "flu-like illness" without the development of overt jaundice. Anicteric hepatitis A, usually occurring without diagnosis, occurs in 50% of infected adults and more than 90% of infected children.[2] Because of this tendency toward subtle infections, hepatitis A can spread rapidly in susceptible populations. During epidemics in school-age children, the attack rate is as high as 20%.[3] Even in obvious cases of hepatitis A, the initial symptoms are highly variable.

The incubation time after exposure to HAV is 15 to 40 days. During the final two to 14 days of this period, a prodromal illness usually develops, with one or more of the following symptoms: low-grade fever, fatigue, headache, pharyngitis, anorexia, nausea, pruritus, and abdominal (hepatic) tenderness. In those patients who enter an icteric phase, the appearance of dark urine, light stools, and jaundice actually signals improving symptoms, decreasing viremia, and decreasing infectivity. Serum abnormalities seldom exceed a transaminase level of 5,000 U/L and total bilirubin level of 10 mg/dl, with the alkaline phosphatase measurement remaining near normal.

A definite diagnosis of acute hepatitis A infection can be made when the IgM anti-HAV antibody is

Table 1

Case Distribution Chart
Hepatitis A Outbreak
Nevada, Mo., and area
September 1987 to January 1988
(Adapted from Missouri Department of Health Report)[5]



detected in a patient's serum. If this is not present, it is necessary to rule out the other three types of viral hepatitis — hepatitis B, delta hepatitis, and non A-non B hepatitis — as well as mononucleosis, medication and alcohol toxicity, biliary obstruction, and right ventricular failure. Fortunately, hepatitis A is the much more common and benign form of hepatitis, especially in community outbreaks. Hospitalization is usually necessary only in those patients who are intractably nauseated and dehydrated, particularly if they are older adults. In these situations, there is no specific therapy, other than providing adequate hydration and supportive care until symptoms decrease. Mortality from hepatitis A is less than 0.1%, and there is no known carrier state or chronic disease due to the virus. A recent study[4] showed that 84% of patients with hepatitis A had returned to clinical and biochemical normality within three months of the onset of symptoms.

Of course, prevention of HAV transmission and infection is the ultimate goal. Public education regarding hand washing, careful food preparation, and other sanitation measures is essential to avoid fecal-oral spread of the hepatitis A virus. If an infected person is identified, immune globulin (0.02 mL/Kg) should be given to all susceptible persons who might have shared food or utensils with the patient. The IG must be given within two weeks of the presumed transmission of the virus, in order to prevent or at least attenuate an active infection. It is not necessary to give immune globulin prophylaxis to casual contacts at school, office, or hospital. However, widespread use of IG may be justified and helpful when an HAV-infected food handler has exposed a large susceptible population. Prompt mobilization of the health care community and education of the public regarding the safety and efficacy of immune globulin is critical in these situations.

This type of hepatitis A outbreak occurred during the fall of 1987 in Nevada, Mo., a community of 9,000 in a rural western part of the state. No other significant incidence of hepatitis A had been noted for many years, and thus there was a large population of previously unexposed susceptible persons. Unfortunately, the index case of hepatitis A occurred in a fast food restaurant employee who handled food for a large number of patrons.[5] His symptoms developed on Sept. 26, 1987, though his identification was made only retrospectively, several weeks later. One incubation period later, in late October and early November, there was the rapid appearance of numerous cases of symptomatic hepatitis A (Table 1). By November 4, 42 cases had been confirmed in and around the community. Thirty-two (81%) of the patients recalled eating at the index fast food restaurant during the exposure period four to six weeks earlier.[5] Most of these individuals were adolescents (median age 19), though the patients ranged in age from 6 to 58 years

Table 2

Normal Laboratory Values
Nevada City Hospital, Nevada, Missouri

White Blood Cell Count:	4,800 to 10,800
SGOT (AST):	Male — 27 to 47 u/L Female — 22 to 37 u/L
SGPT (ALT):	3 to 36 u/L
LDH:	100 to 190 u/L
Alkaline Phosphatase:	50 to 136 u/L
Total Bilirubin	1.0 mg/dL or less

old. Not surprisingly, the older persons were most symptomatic, with both of those over age 50 requiring hospitalization.

Case 1:

A 58-year-old white woman, who ate frequently at the index restaurant, had been in generally good health until late October, 1987, when she had the gradual onset of anorexia, weakness, arthralgias, cough, and low-grade fever. She had been thought to have acute bronchitis, but did not improve after oral amoxacillin therapy. By October 28, 1987, examination revealed severe weakness and dehydration, and she was admitted to Nevada City Hospital. Initial laboratory values (Table 2), included: White blood cell count of 5,100 with 28% atypical lymphocytes; SGOT (AST) of 3,170 u/L; SGPT (ALT) of 265 u/L; LDH of 2,640 u/L; alkaline phosphatase of 348 u/L; and total bilirubin of 1.4 mg/dL. Serum tests for mononucleosis and hepatitis B antigens were negative, while biliary obstruction was ruled out with sonography. IgM anti-HAV antibody was subsequently identified in her serum, confirming the diagnosis of hepatitis A. She was restricted to bedrest, given vigorous intravenous hydration, and otherwise kept comfortable with a minimum of medications. By October 31, her hepatic enzyme levels peaked at the following values: SGOT (AST) of 4,130 u/L; SGPT (ALT) of 3,020 u/L; and alkaline phosphatase of 500 u/L. Her total bilirubin peaked at 7.4 mg/dL on November 2, just as her symptoms were improving and she was again taking oral food and fluids. She was discharged on November 3, 1987, after family members had received immune globulin and instructions on protective sanitation.

By Monday, November 2, it had become obvious to local physicians and health department workers that a major outbreak of hepatitis A was evolving in and around Nevada. The Southwest District Office of the Missouri Department of Health was contacted, and a five-person team was dispatched that same day. An informational effort regarding hepatitis A and its prevention was jointly undertaken, making extensive use of area newspapers, radio stations, and television stations. (Petersen P: *Nevada Daily Mail*, Nov. 2-11, 1987.) By November 4, a full epidemiologic evaluation had been completed, revealing food handlers at two additional fast food restaurants to be among the initial cases of hepatitis A. These workers had presumably exposed many more susceptible patrons to HAV between October 27 and November 1, when their infections were diagnosed. The risk of a much larger second outbreak loomed, with only one remaining week in which to identify and treat (with IG) those at risk of developing an acute hepatitis A infection.

The Missouri Department of Health made a widely publicized announcement that there would be free administration of immune globulin, on November 10, to all susceptible persons who had eaten at these two restaurants on the days of possible exposure to HAV. Special supplies of immune globulin were obtained and the entire health care community in and around Nevada was mobilized. More than 1,600 persons were inoculated with IG on November 10, with the total number of doses used during the outbreak reaching 3,300. This massive effort proved to be extremely effective in halting progression of the outbreak, as only 10 more cases of hepatitis A were identified thereafter, the last being on January 26, 1988. Not surprisingly, those few cases that did develop later were in susceptible persons who chose not to receive immune globulin prophylaxis.

Case 2:

A 34-year-old white man had eaten at one of the fast food restaurants in question on November 1, 1987. He had not obtained immune globulin when it was made available. He remained in good health until November 25, when he had the rapid onset of nausea, arthralgias, and low-grade fever. By November 29, this had progressed to intractable vomiting, weakness, and dehydration, necessitating admission to Nevada City Hospital. Initial laboratory values included: white blood cell count of 7,200 with 4% atypical lymphocytes; SGOT (AST) of 4,720 u/L; SGPT (ALT) of 3,420 u/L; LDH of 4,000 u/L; alkaline phosphatase of 186 u/L; and total bilirubin of 3.0 mg/dL. These proved to be his peak hepatic enzyme values, though the total bilirubin peaked three days later at 6.4 mg/dL. An assay for IgM anti-HAV antibody was positive, confirming the diagnosis of hepatitis A. During his hospitalization, vigorous intravenous hydration and anti-emetic therapy was used, but no other specific intervention was necessary. By December 2, his symptoms were improved, he was tolerating oral food and fluids, and he was discharged. Family members and close contacts received immune globulin, as well as instructions in protective sanitation.

Discussion

The experiences of the author and other health care providers in Nevada, Mo., during the 1987 outbreak of hepatitis A have provided some strong impressions that could help other communities confronted with similar outbreaks. First, state health officials should be notified immediately when an outbreak of hepatitis A is suspected. The Missouri Department of Health provided invaluable leadership and coordination of local health care resources during the Nevada outbreak. Second, extensive efforts should be made to keep local citizens informed and educated, preferably through one spokesperson. Media cooperation during this hepatitis A outbreak prevented panic and facilitated effective control measures. Third, mass administration of immune globulin may be necessary when infected food handlers are identified. The 3,300 doses of immune globulin given to potentially exposed persons in and around Nevada clearly succeeded in preventing a much larger epidemic of hepatitis A during the fall of 1987.

References

1. Braunwald E (ed): *Harrison's Principles of Internal Medicine,* ed 11. New York, McGraw-Hill, 1987.
2. Harvey AM (ed): *The Principles and Practices of Medicine,* ed 19. New York, Appleton-Century Crofts. 1976.
3. Hoeprich P (ed): *Infectious Diseases,* ed 2. Hagerstown, Md., Harper & Row, 1977.
4. Lesnicare G: A prospective study of viral hepatitis A and the question of chronicity. *Hepato-Gastroenterology* 1988;35:69-72.
5. Bright MF, St Gemme WL: *Hepatitis A Outbreak, Nevada, Missouri, October, 1987-January, 1988.* Official report, Bureau of Communicable Disease Control and Southwestern District Health Office, Missouri Department of Health, July 1988.

The Author

WARREN C. LOVINGER, JR., M.D.

Dr. Lovinger is in the private practice of internal medicine in Nevada, Missouri.

Reprints

Warren C. Lovinger, Jr., M.D.
122 West Walnut
Nevada, Missouri 64772

Colposcopy of Condylomatous Men

James G. Blythe, M.D., and Michael J. Chehval, M.D.
St. Louis, Missouri

The male partners of women diagnosed with human papilloma virus (HPV) or dysplasia were examined colposcopically. Anogenital infection was found in 82% of the men, and dysplasia in two of the partners of dysplastic women. Men may not be merely asymptomatic carriers of HPV.

Infection with human papilloma virus (HPV) is becoming an increasingly common health problem. An estimated 25 to 50 million Americans now have genital warts — about twice as many as have herpes. Moreover, there is evidence that HPV is not simply a wart-causing virus but can also induce cervical and vulvar carcinomas.[1]

Several studies have attempted to define the role of males in the development of cervical carcinoma. In a pioneering paper of 1842, Rigoni-Itern[2] demonstrated that the incidence of cervical cancer was much higher in prostitutes than nuns. More recent studies have revealed that the etiology of cervical carcinoma is related to socioeconomic factors, the sexual habits of male partners, and other risk factors associated with males. For example, the second wife of a man whose first wife had cervical carcinoma is at increased risk for this type of cancer.[3, 4]

In view of this link between HPV and genital cancers, studies of HPV infection in males would seem appropriate. However, there has been little interest in this area. Among the few published reports are those by Baggish,[5] who found that 25% and then 47% of the partners of women with HPV were also infected, and Barrett,[6] who demonstrated a 60%-80% infectivity rate among men and women returning from World War II. More recently, Levine[4] found that 53% of male partners of a group of infected females were also infected, while the figure was 85% in a study by Ferenczy.[7]

These reports, while few in number, stimulated our interest in the partners of our female condylomatous patients. We developed a colposcopic examination for the detection of HPV infection in males and established a protocol for the selection of males for treatment.

Selection of Patients

Most of the males in our study were sexual partners of women referred to our office for HPV infection or dysplasia. By explaining the possible complications of HPV infection, we persuaded the women to bring their partners for examination. Most of the men initially expressed reluctance to be examined.

The purpose of the examination was to determine if the men were positive or negative for HPV. Treatment, consisting of laser therapy, was recommended only for men who met certain criteria. If both the man and his partner were infected and the woman also had dysplasia, we strongly advised treatment for both members of the couple. But if the woman showed no evidence of dysplasia, we did not recommend treatment for either partner, regardless of whether the male was also infected or not. We reasoned that we could quickly intervene if the woman became dysplastic in the future, when the risk of general anesthesia and the inconvenience of surgery would be more justified than when the disease was benign.

The total number of men in the study was 34. Thirty-one of these were partners of our female patients, and three were referred by other gynecologists. The age range was 20 to 60 years, with an average of 32 years.

Examination

Our examination was based on the same principles as that for HPV infection in females. After the man had disrobed, we asked him to encompass his penis, scrotum, perineum and anus with a washcloth soaked in 3%-5% acetic acid and then to sit on the examination table for at least five minutes. Acetic acid makes HPV lesions more visible, but its action is slower in the male than in the female. Therefore it was important not to rush this part of the procedure.

After returning to the room, we placed the patient on the examination table with his legs in stirrups. Then we examined the prepared areas with a colposcope. This is a binocular microscope equipped with variable magnification and mounted on a floor stand or to the side of the examining table. In female patients it is used to inspect the cervix, vagina, vulva, perineum and rectum for the presence of microscopic lesions. In this study, we used it to inspect the penis, scrotum and anus of male subjects.

In addition to the colposcopic examination, we performed colposcope-directed biopsies on 20 of the 34 patients. The biopsies sampled 22 sites — the penis in 17 patients and the scrotum in five patients. We did not attempt to biopsy the glans, which is prone to excessive bleeding.

The biopsy was conducted with the aid of local anesthesia. After injecting the anesthetic with a 25-gauge needle into an area of infection, we took a sample of tissue with a cervical biopsy forceps. We obtained only a very shallow sample because the penis, unlike the vulva, lacks subcutaneous fibrous tissue. A Key's punch is unsuitable for this procedure because it penetrates too deeply.

Bleeding was minimal, requiring one or two silver nitrate sticks at most. None of the patients complained of discomfort, and none were dispatched with special instructions other than to use normal hygiene.

Results of Colposcopy and Biopsy

In our group of male partners of HPV-infected women, 82% (28/34) had HPV lesions that were detectable by our colposcopic examination.

As in our female patients, the lesions varied in appearance. Thirteen males had flat lesions (Fig 1), four had papillary lesions (Fig 2), and eight had micropapillary lesions (Fig 3). Six others had both flat and micropapillary lesions. Flat HPV lesions were found most commonly on the shaft of the penis, appearing as a mosaic of dense white, gray-white and barely white patches. Micropapillary lesions often resembled hair follicles, but careful inspection with the colposcope revealed the presence of one or more spicules (Fig 3).

Only six patients had lesions that were visible to the naked eye, and we would have missed 82% of the lesions had we relied solely on visual inspection (Table 1). All the HPV-positive men had multiple sites of infection, including the penis, scrotum, glans and anus (Table 1), in all possible combinations (Table 2).

Table 1

Locations of HPV Lesions Detected through Visual Inspection and Colposcopic Examination

	No. of Patients	
Location	*Visual Inspection*	*Colposcopic Examination*
Penis	4	27
Scrotum	1	16
Glans	2	9
Anus	3	8

Table 2

Genitalia Involved in HPV Infections

Penis	*Scrotum*	*Glans*	*Anus*	*No. of Patients*
+	+	−	−	16
+	+	+	−	17
+	+	+	+	3
−	+	+	−	7
−	+	+	+	3
−	−	+	+	3
+	−	+	−	9
+	−	−	+	8
−	+	−	+	6

Table 3

Histology of Biopsy Samples from Condylomatous Males

Abnormality	*No. of patients*
HPV	13
PIN I	2
PIN II	0
PIN III	0
Other	6

Table 4

Dysplasia in Female Partners of HPV-Infected Males

Location	*Abnormality*	*No. of patients*
Cervix	CIN I	3
	CIN II	3
	CIN III	1
	CA Cx	1
Vagina	VAIN I	1
	VAIN II	2
Vulva	VIN II	1
	VIN III	2

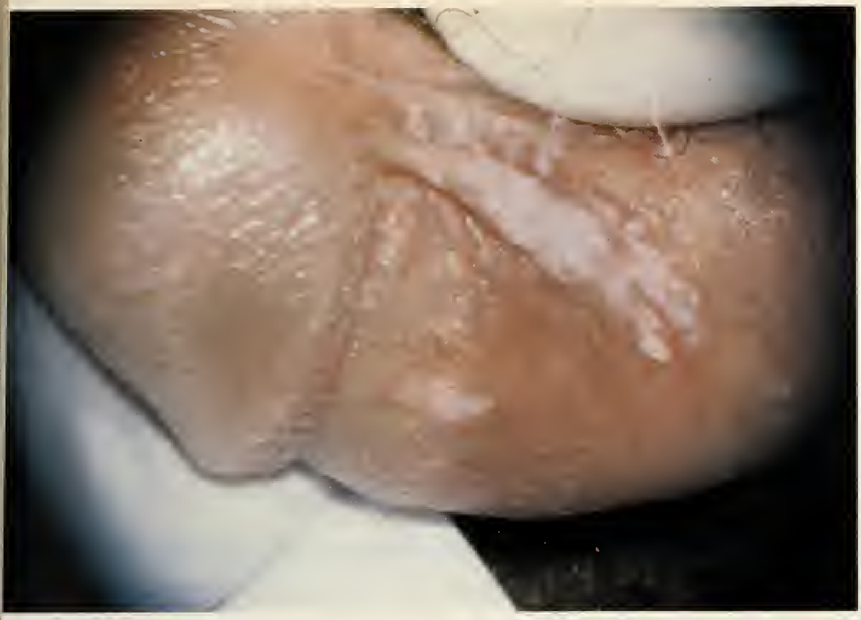


Fig 1. Flat penile HPV (A).

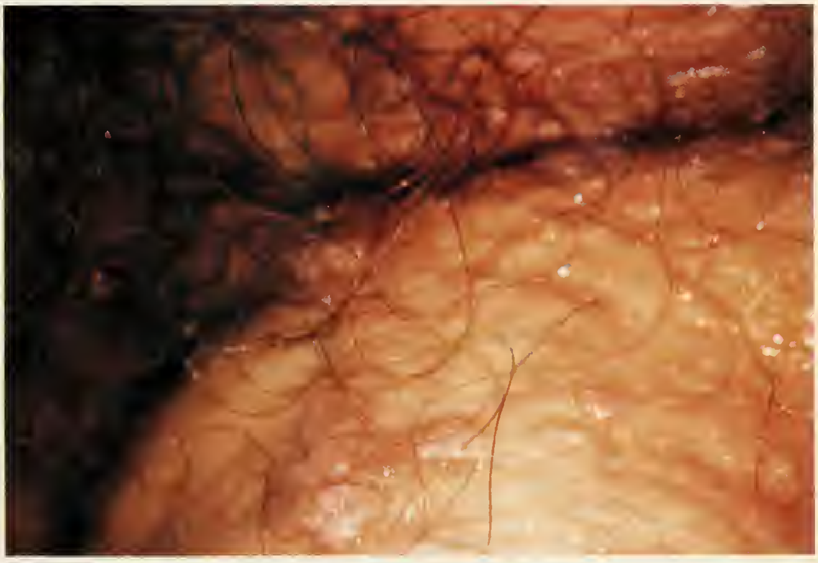


Fig 2. Papillary penile HPV (A).

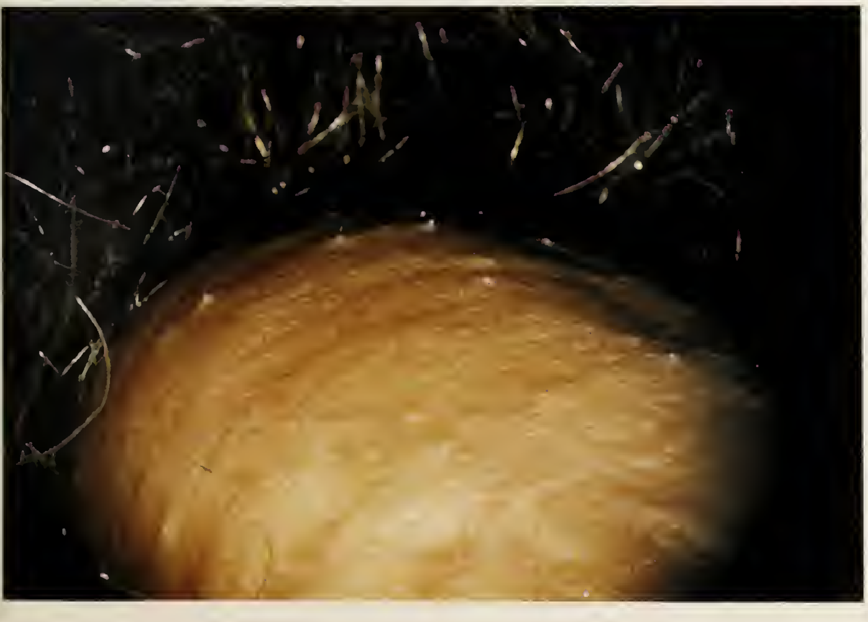


Fig 3. Micropapillary penile HPV.
A = spicules.

The biopsies confirmed the colposcopic diagnosis of HPV infection in a majority of the selected patients, though six proved negative for HPV (Table 3).

Neoplasia in Sexual Partners

Similarities between the HPV infections of sexual partners, such as similarity of antigenic type and the virus's tendency to infect metaplastic squamous epithelium in both the male and female, made us wonder if the course of HPV infection in the male was similar to that in his partner. Were the males with penile intraepithelial neoplasia (PIN) I and II having intercourse with dysplastic females?

The partners of our 34 subjects had various forms of dysplasia (Table 4). When we paired data from these women with those from their mates, we found that one man with PIN I was the partner of a woman with CIN I. The other man with PIN was the partner of a woman with vaginal intraepithelial neoplasia of moderate degree (VAIN II).

Discussion

Our study suggests that HPV infects the majority of male partners of condylomatous women and that its presence can be diagnosed with the aid of colposcopy as effectively as in females. Moreover, the virus is distributed as widely in male organs as in female organs, often infecting the anus, glans and scrotum as well as the shaft of the penis. For this reason, thorough examination of all target organs followed by laser therapy of each affected site is necessary to eliminate the virus.

Our finding that some of our males had dysplasia suggests that men can no longer be regarded simply as asymptomatic carriers of HPV. Therefore we suggest that physicians, be they gynecologists or urologists, pay more attention to genital warts in males, particularly those with dysplastic partners.

References

1. Reid R, Greenberg M, Jenson AB, et al: Sexually transmitted papilloma viral infections. I. The anatomic distribution and pathologic grade of neoplastic lesions associated with different viral types. *Amer J Obstet Gynecol* 1987;156:212.
2. Rigoni-ltern D: Fatti statistici relativi alle malattie cancrose. *Giornale Service Progr Pathol Terap Ser* 1842;2:507.
3. Rotkin ID: A comparison review of key epidemiological studies in cervical cancer related to current searches for transmissible agents. *Cancer Res* 1973;33:1353.
4. Levine RU, Crum CP, Herman E, et al: Cervical papilloma virus infection and intraepithelial neoplasia: A study of male sexual partners. *Obstet Gynecol* 1984;64:16.
5. Baggish MS: Improved laser techniques for the elimination of genital and extragenital warts. *Amer J Obstet Gynecol* 1985;153:545.
6. Barrett TJ, Silbar JD, McGinley JP: Genital warts: A venereal disease. *JAMA* 1954;154:333.
7. Ferenczy A: To contain spread of condylomata: Treat your patient's partner. *Contrib Gynecol Obster* 1986;27:51.

The Authors

JAMES G. BLYTHE, M.D.
MICHAEL J. CHEHVAL, M.D.

The authors are from St. John's Mercy Medical Center, St. Louis, Missouri. Dr. Chehval is also associate clinical professor of urology at St. Louis University Medical Center, St. Louis.

Reprints

James G. Blythe, M.D.
Department of Obstetrics and Gynecology
St. John's Mercy Medical Center
615 South New Ballas Road
St. Louis, Missouri 63141-8221

Maxillofacial Trauma in Two Rural Level II Trauma Centers

Walter A. Schroeder, Jr., D.O., M.D.
Cape Girardeau, Missouri

A 10-year retrospective study of maxillofacial trauma cases in Southeast Missouri reveals the causes of the trauma and profiles the age and gender of the victims. In contrast with the findings of urban institutional studies, which are more commonly reported, motor vehicle accidents accounted for the majority of these cases.

Maxillofacial trauma may cause immediate impairment of both vital and critical functions. Head and neck trauma can result in airway compromise and hypovolemic shock, requiring immediate life-saving management. Vision, hearing, and swallowing and chewing capabilities are often at risk. The patient's physical appearance is always a concern since significant soft tissue injury occurs due to maxillofacial trauma.

Most major trauma studies are conducted at tertiary care institutions. These university-affiliated hospitals treat numerous trauma victims whose cases are often evaluated according to the surgical treatment provided.

Few studies are conducted in rural areas that have a lower occurrence of maxillofacial trauma. Nevertheless, trauma continues to be the leading cause of death among individuals ages 1 to 44. Those between the ages of 15-24 appear to be the most vulnerable.[1,2] One study has estimated that 8 million Americans who were alive in 1980 will eventually die as a result of trauma. The lack of facial protection often results in traumatic injury to the maxillofacial skeleton in vehicular accidents, personal assaults, athletic events, and work-related accidents.[3,4]

Cape Girardeau, Mo., is one of the major medical centers between St. Louis, Mo., and Memphis, Tenn. In Southeast Missouri, trauma victims are triaged in smaller hospitals, then referred to one of two Level II hospitals in Cape Girardeau.

Methods

The charts of all maxillofacial trauma victims treated at either St. Francis Medical Center or Southeast Missouri Hospital in Cape Girardeau, Mo., were reviewed during a 10-year period. At St. Francis, the charts from January 1, 1976, through December 31, 1985, were reviewed. The charts at Southeast Missouri Hospital from January 1, 1977, through December 31, 1986, were reviewed. The data collected included the age and sex of the patient, the nature and etiology of the accident, the type of facial fracture, the site of mandibular fracture, and the treatment rendered the patient. In addition, associated injuries were noted. The consumption of alcohol, either measured by the blood alcohol level or as suspected by the emergency medicine physician, was also recorded.

Each trauma victim's length of hospitalization was also noted and recorded, including any time spent in an intensive care unit.

Cases excluded from the study involved patients with simple nasal fractures or patients immediately transferred to a tertiary care institution. In addition, patients without available radiographs, those with radiographs in which a fracture site was not reported, or patients who refused medical treatment and left the hospital against medical advice were omitted. The patients triaged in the emergency room then immediately referred to a physician's office were also excluded from the study, unless they were readmitted to one of the two institutions.

Table 1

Etiology of Facial Fractures N = 421 Patients

	Mandibular (N = 263)		Malar (N = 126)		Mid-facial (LeForte) (N = 32)	
Motor Vehicle Accident	88	33.5%	34	26.9%	18	56.2%
Assault	80	30.4%	30	23.8%	4	12.5%
Fall	37	14.1%	16	12.7%	0	0%
Bicycle	9	3.4%	2	1.6%	0	0%
Motorcycle	4	1.5%	0	0%	2	6.3%
ATV	5	1.9%	1	.7%	0	0%
Athletic	7	2.6%	25	19.8%	0	0%
Gunshot	2	.8%	0	0%	0	0%
Miscellaneous	31	11.8%	18	14.5%	8	25.0%

The complications involving mandibular fractures, the most common fracture type, were recorded. The complication of malocclusion was not evaluated. Any readmission to the hospital within six months from the time of discharge was noted.

The data from both hospitals were then combined, and the results were analyzed.

Results

This study showed the most common fracture was fracture of the mandible. Second were malar fractures, and LeForte (mid-facial) fractures were the third most common. A total of 263 mandibular fractures, 126 malar fractures, and 32 mid-facial LeForte type fractures were recorded. Eighteen (6.8%) of the patients with mandibular fractures had other maxillofacial fractures in addition to the mandibular fracture. These patients were categorized as mandibular fractures with other maxillofacial injury. Their other fractures were not included in the other two categories. There were 191 male and 72 female subjects in this study. The average age of the men was 27.3 years, of the women, 31.0 years. The various categories of the mandibular fractures are listed in Table 1. Motor vehicle accidents were the most common cause of injury. Fifty-three of the 263 patients (20.1%) had associated injuries, including orthopedic, neurological or extensive soft tissue injuries. Alcohol consumption affected 35 of these MVA patients (13.3%).

Of the fracture sites, 170 (64.6%) were unilateral and 93 (35.4%) were bilateral. One hundred forty-eight fracture sites were treated with a closed reduction, while 103 (39.2%) were treated with either a Barton's bandage or a soft diet. Five (1.8%) received unknown treatment.

Of the 263 patients, 80 required one day in ICU (30.4%). The average length of stay of a patient with open reduction was 7.8 days. Of the patients who required at least one day in the ICU, the average stay in the ICU was 2.5 days. Patients who had no other injuries had an average stay of 7.0 days.

Of the patients who underwent closed reduction, the average length of stay was 5.1 days. Patients staying in the ICU were there an average of 2.3 days. Patients with no other injuries who underwent closed reduction stayed in the hospital an average of 2.9 days (Table 2).

Table 2

Average Length of Hospitalization

Treatment	Patient Days	Intensive Care Unit	No Other Injury
Open	7.8 days	2.5 days	7.0 days
Closed	5.1 days	2.3 days	2.9 days

Twelve of the 263 patients had complications, representing 4.6% of those with mandibular fractures. Complications included such things as soft tissue infections, abscess, delayed union, or osteomyelitis, but not malocclusion. Malocclusion was seldom reported to the institution following treatment for maxillofacial trauma. This was probably because these problems were managed on an outpatient basis. If any patients had malocclusion requiring rehospitalization, the hospitalization occurred after the six-month period following discharge. No patients were readmitted for revision surgery during our six-month post-discharge study period.

The exact sites of unilateral and bilateral fractures are shown in Table 3. The condyle was the most common site of fracture, followed by the body and angle (Fig 1).

The most common bilateral type of fracture was a body/condyle fracture. The body/angle fracture was slightly less common. Overall, the most frequent fracture sites were the condyles, which involved 36.8% of all fractures of this particular series. The body was involved in 35.7% of all the fractures, and the angle in 26.2%.

Of the 126 malar fractures, 73 (57.9%) were the classical tripod or trimalar fractures. This is a fracture that involves the malar bones in three sites, hence the name "tripod"[5] (Fig 2). Seventeen (13.5%) were zygomatic arch fractures, involving the zygomatic process of the malar bone. Thirty-two (25.4%) were blow-out fractures involving a portion of the orbital floor. This fracture is often the result of a blow from a fist

Table 3

Sites of Mandibular Fractures

Unilateral N = 170			*Bilateral N = 93*		
Body	39	22.9%	Body/Condyle	22	23.6%
Condyle	49	28.8%	Body/Angle	20	21.5%
Angle	37	21.8%	Body/Ramus	7	7.5%
Ramus	12	7.0%	Body	6	6.4%
Parasymphyseal	4	2.3%	Condyle	10	10.8%
Symphyseal	12	7.0%	Condyle, Parasymphyseal	4	4.3%
Alveolar	9	5.3%	Condyle, Angle	4	4.3%
Coronoid	4	2.3%	Angle, Ramus	1	1.1%
Comminuted	1	.8%	Compound	1	1.1%
Unspecified	3	1.8%	Complete Ablation	1	1.1%
			Symphyseal, Alveolar	2	2.2%
			Angle, Parasymphyseal	7	7.5%
			Condyle, Symphyseal	8	8.6%

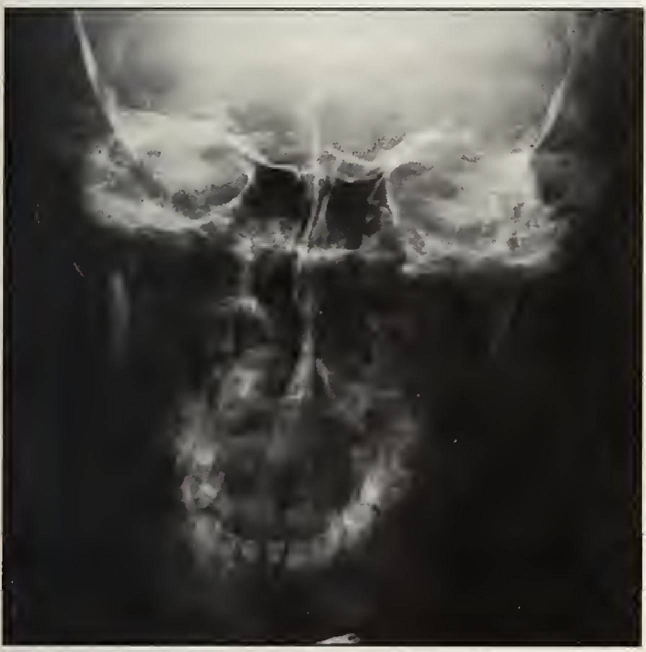


Fig 1. Fracture of the right subcondylar region, the most common fracture site in this series.

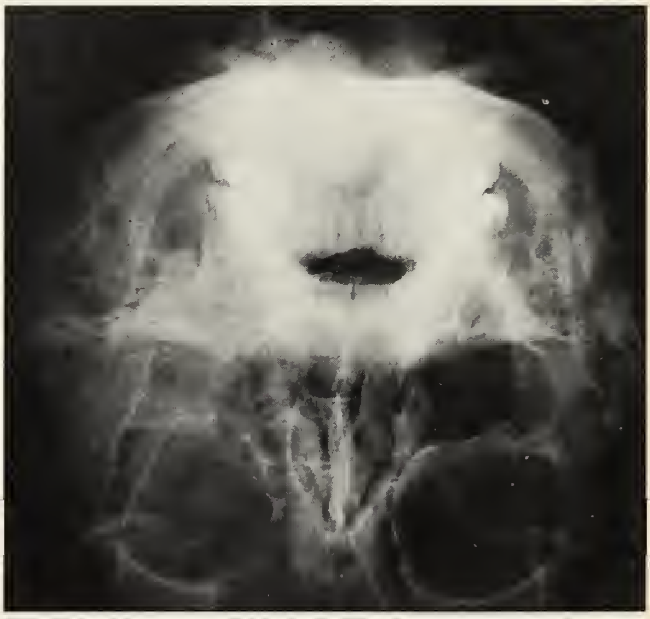


Fig 2. Left trimalar fracture demonstrating fracture sites involving the malar bone.

or a baseball. A portion of the orbital contents extrudes into the maxillary sinus due to force. Thus, the orbital floor has areas of weakness, allowing possible entrapment of orbital contents during traumatic injury.[3, 5, 6] Four of the 126 fractures were actually a combination of fractures involving the malar bone, zygomatic arch or orbital floor.

Ninety-two (73%) of the fractures occurred in men while 34 (27%) involved women. Eight of these patients (6.3%) were suspected or documented as having elevated blood alcohol levels. Twelve of the 126 (9.5%) also had other injuries. Table 1 shows that most patients were involved in either MVAs or personal assault. Athletic injuries were the cause of 19.8% of the fractures.

The patients had an average hospital stay of 4.2 days. Eleven of the 126 patients (8.7%) spent at least one day in the ICU. Patients needing intensive care stayed 2.2 days (Table 4); the average age was 28.8 years for men and 38.8 years for women.

Mid-facial (LeForte) fractures occurred in only 32 patients of our series of 421 patients. LeForte fractured patients often have neurological impairment requiring a neurosurgeon. Neurosurgical care was unavailable at either institution during the study's 10-year period. Therefore, many patients might have been transferred to a larger center. Nineteen (59.3%) of the patients were male, with an average age of 27.4 years. Thirteen (40.7%) were female, with an average age of 46.9 years.

The causes were similar to the previously-mentioned facial fractures. Eighteen (56.2%) were from

Table 4

Average Length of Hospitalization

	Patient Days	Intensive Care Unit	% Required ICU
Malar	4.2 days	2.2 days	8.7%
Mid-Facial	9.2 days	2.6 days	46.8%

MVAs and four (12.5%) were from personal assault.

A type I LeForte fracture was seen in 53.1% of the patient population. LeForte II and III fractures constituted nine (28.1%) and six (18.8%), respectively (Fig 3, 4).

Three of the 32 (10.6%) involved patients in whom alcohol consumption was a suspected contributing factor.

The average length of stay for all of these patients was 9.2 days. Of the 32 (46.8%) involved, 15 spent at least one day in the ICU. The average length of stay was 2.6 days (Table 4). Four of the 32 (12.5%) involved other injuries.

Discussion

The concept of levels of trauma care originates with the special problems concerning the trauma victim. The level of care in a given institution is contingent upon the institution's resources and the medical staff's commitment to providing optimal care. The American College of Surgeons' criteria for the different levels of trauma centers are well established.[7] These criteria organize trauma care to provide optimal health care for the trauma patient. Most surgeons agree that the practice of taking severely injured trauma patients to the nearest hospital is no longer acceptable. Transport of the victim to the most appropriate hospital prevents delay of appropriate treatment and loss of precious time. Yet, the wasteful practice of sending less severely injured patients to a sophisticated Level I center continues.

In an ideal system, the hospital capability and the severity of the injury would be clearly matched. Unfortunately, triage in rural areas sometimes does not allow this. Patients in rural areas are often injured far from a Level I or Level II center. Obviously these patients require immediate triage at the nearest facility. Patients requiring advanced care can then be secondarily triaged to the more distant Level I or Level II center as soon as feasible.

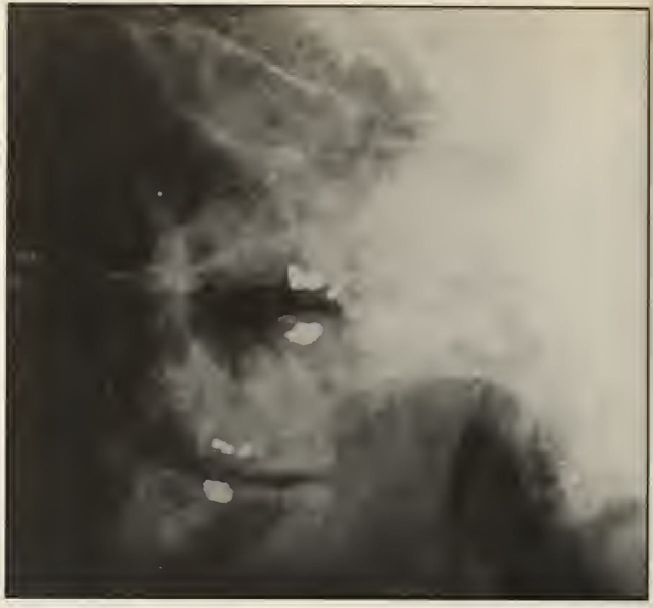


Fig 3. Lateral radiograph demonstrating flattened appearance of complex mid-facial fracture.

The primary difference between Level I and Level II institutions appears to be the immediate availability of staff specialists. Level II hospitals are usually larger community hospitals dealing with serious trauma cases in non-urban areas that lack the resources for providing Level I care. Most Level I centers are teaching institutions, or larger hospitals in urban areas with university affiliation.

Certainly, proper triage and pre-hospital care remain essential for optimal care to the trauma patient. The proper role of an emergency helicopter transport system has been debated, but many feel that its use in rural areas will be beneficial and livesaving in certain situations.[8, 9] Obviously its injudicious use can substantially increase the cost of medical care, a cost which is undergoing closer scrutiny.

Conclusion

This is a retrospective review of 10 years of major maxillofacial trauma in two Level II centers in South-

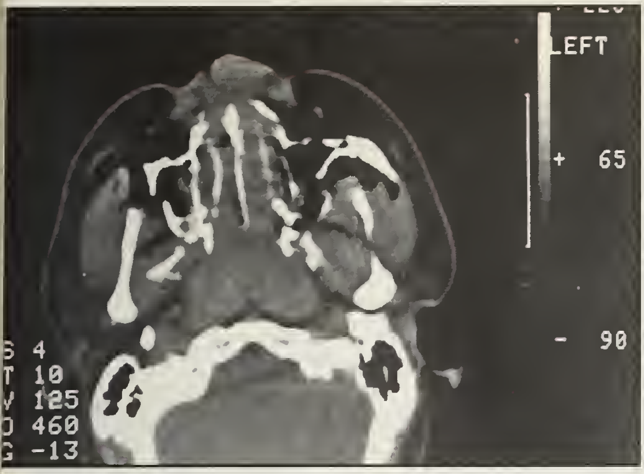


Fig 4. CT of multiple maxillary fractures throughout mid face. Blood noted in nasal cavity. Note fracture of pterygoid plates.

east Missouri. Motor vehicle accidents appear to be the leading cause of major maxillofacial trauma in this area, whereas personal assault is the primary cause in cities. As one might expect, the length of hospitalization appears to be proportional to the severity of the injury. The percentage of associated injury in mandibular trauma can certainly increase the length of hospitalization for those patients whose mandibular trauma may not be the primary cause for a long hospitalization. The 12.5% rate of associated injury occurring with mid-facial fractures might be smaller than expected because patients with neurological impairment were often transferred for neurosurgical care.

Malocclusion, one of the more common complications of maxillofacial surgery or trauma, does not appear to be reported to the institution during follow-up care with the patient. This could be due to the patient's failure to follow-up with his primary care physician or the lack of patient desire to have the malocclusion corrected.

The role of alcohol intoxication continues to be a public health problem.[2] Nearly 11% of all maxillofacial trauma patients during the 10-year period reviewed were either documented or suspected to be under the influence of alcohol. The consequences are costly hospitalization and loss of employment, in addition to the injury of the patient.

In institutions where admission blood alcohol levels are routinely obtained, alcohol abuse in trauma victims appears to be well documented, particularly among those involved in MVAs.

The maxillofacial trauma in this study can be efficiently managed at a Level II trauma center when adequate staff specialists are available. The role of appropriate triage cannot be overemphasized. The commitment of the hospital medical staff and the institution remains the most significant factor in providing optimal care to the trauma patient.

References

1. Baker SP, O'Neill B, Karpf RS: *The Injury Fact Book.* Lexington Mass, DC Health & Co, 1984.
2. Soderstrom CA, Cowley RA: A national alcohol and trauma center survey. *Arch Surg* 1987;122:1067-1071.
3. Foster CA, Sherman JE: *Surgery of Facial Bone Fractures.* New York, Churchill Livingstone, 1987, pp 1-12.
4. Rood SR, Gallia LJ, Johnson J, Myers EN: *Treatment of Mandibular Fractures.* Washington DC, American Academy of Otolaryngology-Head & Neck Surgery, 1983, p 12.
5. Gerlock AJ, Sinn DP, McBride KL: *Clinical and Radiographic Interpretation of Facial Fractures.* New York, Little Brown & Co., 1981, pp 123-144.
6. Jelks GW, Jelks EG, Ruff G: *Otolaryngologic Clinics of North America.* Philadelphia, WB Saunders, Feb 1988, pp 13-34.
7. *Bulletin of the American College of Surgeons* 1986;71:4-12.
8. Urdaneta LF, Miller BK, et al: Role of an emergency helicopter transport service in rural trauma. *Arch Surg* 1987;122:992-996.
9. Department of Health, Bureau of Emergency Medical Services: *Hospital Resources for Optimal Care of the Injured Patient,* Feb 1988.

The Author

WALTER A. SCHROEDER, JR., D.O., M.D.

Dr. Schroeder is in the private practice of otolaryngology-head and neck surgery in Cape Girardeau, Missouri.

Reprints

Walter A. Schroeder, Jr., D.O., M.D.
35 Doctors' Park
Cape Girardeau, Missouri 63701

MEDICAL PROFESSIONAL LIABILITY INSURANCE

Playing Cat & Mouse?

Just another game, right? But as a health care professional, you don't have time to play such games, especially where your **medical liability insurance** is concerned.

Your last insurance company caught you with surprisingly low premiums, then gave you renewal rates that sent you running. And remember that other company that simply vanished into thin air on renewal? You were left to play "hide 'n' seek." And you lost.

Stop playing someone else's game, and talk with us at Medical Defense Associates. **MDA is a not-for-profit medical liability insurance company** that was formed by doctors to serve only doctors.

For more than 12 years, MDA has offered consistently competitive medical liability rates and superior career protection. We have an excellent reputation for protecting YOUR reputation with aggressive defense of unmerited claims. That's why **MDA insures more of Missouri's doctors than any other medical liability insurance company.**

Don't pussyfoot around. Catch the winner ...because we don't play games.

Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

Final Disciplinary Actions

At the August 19-20, 1988 meeting of the State Board of Registration for the Healing Arts, the following final disciplinary actions were taken. In addition, the listing includes one reportable action finalized since the February 19-20, 1988 meeting that was not included in the last published listing (pg. 686, October 1988 Missouri Medicine). This information is made available to the public under the provisions of Section 334.101 RSMo.

■ **GIORA G. ANGRES, M.D.,** *San Diego, California*
Order dated 9/13/88. Revocation of Missouri license.
Violation: Section 334.100.2(2)(5)(8) RSMo. 1986.

■ **JAMES D. BOWEN, M.D.** *Ontonagon, Michigan*
Order dated 9/13/88. Revocation of Missouri license.
Violation: Section 334.100.2(2)(8) RSMo. 1986.

■ **THOMAS P. ELLIOTT, D.O.** *Seminole, Florida*
Order dated 9/13/88. Revocation of Missouri license.
Violation: Section 334.100.2(8) RSMo. 1986.

■ **LAWRENCE A. REED, M.D.** *Tulsa, Oklahoma*
Order dated 9/13/88. Revocation of Missouri license.
Violation: Section 334.100.2(8) RSMo. 1986.

■ **ZANE GARD, D.O.** *Sturgeon, Missouri*
Order dated 10/17/88. Six years probation.
Violation: Section 334.100.1(4)(5) RSMo. 1986.

■ **JAIME BLASQUEZ, M.D.** *Upland, California*
Order dated 9/13/88. Three years probation.
Violation: Section 334.100.2(2)(8) RSMo. 1986.

■ **JAMES A. GULICK, D.O.** *Mesa, Arizona*
Order dated 9/13/88. Thirty day suspension, two years probation.
Violation: Section 334.100.2(5)(8) RSMo. 1986.

■ **MICHAEL D. BALL, D.O.** *Mountain Grove, Missouri*
Order dated 9/5/88. One week suspension.
Violation: Section 334.100.2(6)(13)(23) RSMo. Supp. 1987.

■ **ALBERT L. PFAUTH, D.O.** *Excelsior Springs, Missouri*
Order dated 10/7/88. Surrendered controlled substance authority.
Violation: Section 334.100.2(4)(6)(13) RSMo. 1986.

■ **JOHN H. STANLEY, M.D.** *Kansas City, Missouri*
Order dated 9/13/88. Formal reprimand for practicing without license in Kansas.
Violation: Section 334.100.2(2)(5) RSMo. 1986.

■ **MONTE R. KAHLER, M.D.** *Bolivar, Missouri*
Order dated 8/8/88. Two years probation.
Violation: Section 334.100.2(13) RSMo. 1986.

In Memoriam

■ **George E. Gantner, M.D.,** died November 15, 1988 at the age of 61. Dr. Gantner was a nationally-known forensic pathologist and chief medical examiner of St. Louis and St. Louis County. He became the city's first medical examiner when the post was created in 1977 to upgrade the old coroner system to a university-related department of advanced forensic medicine. He had been the county's first medical examiner when that post was formed in 1969. He obtained his medical degree in 1953 from St. Louis University Medical School. Dr. Gantner was a member of the St. Louis Metropolitan Medical Society.

■ **Leopold Lachance, M.D.,** died November 3, 1988 at the age of 80. Dr. Lachance, a family physician, practiced medicine in Centralia for more than 40 years. He obtained his medical degree in 1939 from the University Cours de Medicine at Laval University in Quebec. Dr. Lachance was a member of the Boone County Medical Society.

■ **David D. Miller, M.D.,** died November 19, 1988 at the age of 45. Dr. Miller, a general surgeon, practiced medicine in Springfield. He obtained his medical degree in 1969 from the University of Oklahoma College of Medicine. Dr. Miller was a member of the Greene County Medical Society.

■ **Larry G. Piepergerdes, M.D.,** died November 4, 1988 at the age of 51. Dr. Piepergerdes, an ophthalmologist, practiced medicine in Kansas City and Lee's Summit since 1972 and had served on the staffs of the Independence Regional Health Center, the Medical Center of Independence, the Lee's Summit Community Hospital and Research Medical Center. He was an assistant professor of ophthalmology at the University of Missouri-Columbia in 1971-72. He served as president of the Missouri State Medical Association in 1987-88. He received a bachelor's degree from Iowa State University in 1959 and obtained his medical degree in 1964 from the University of Missouri-Columbia. Dr. Piepergerdes was a member of the Metropolitan Medical Society of Greater Kansas City.

CARAFATE®
(sucralfate) Tablets

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

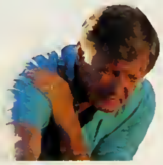
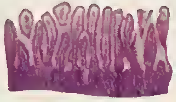
HOW SUPPLIED
CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

Reference:
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

Another patient benefit product from
PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

CAFAD276 0160N8

Carafate® for the ulcer-prone NSAID patient

Aspirin and other nonsteroidal anti-inflammatory drugs weaken mucosal defenses, which may lead NSAID  users to become prone to duodenal ulcers[1] For those NSAID users who do develop duodenal ulcers, CARAFATE® (sucralfate/Marion) is ideal first-line therapy. Carafate rebuilds mucosal  defenses through a unique, nonsystemic mode of action. Carafate enhances the body's natural healing ability while it protects damaged mucosa from further injury. So the next time you see an arthritis patient with a duodenal ulcer, prescribe nonsystemic Carafate: therapy for the ulcer-prone patient.

Unique, nonsystemic

CARAFATE®
sucralfate/Marion

CAFAD276

Please see brief summary of prescribing information, and reference on adjacent page.

0160N8

THE LOWER RESPIRATORY TRACT—
More vulnerable to infection in smokers and older adults

THE
LITTLE GARAGE
Ra

Experience counts

Ceclor® Pulvules® 250 mg
cefaclor

think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS

Administer cautiously to allergic patients

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics It must be considered in differential diagnosis of antibiotic-associated diarrhea Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it
- Prolonged use may result in overgrowth of nonsusceptible organisms
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old Ceclor penetrates mother's milk Exercise caution in prescribing for these patients

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include
- Gastrointestinal (mostly diarrhea). 2 5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1 5%, usually subside within a few days after cessation of therapy Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor No serious sequelae have been reported Antihistamines and corticosteroids appear to enhance resolution of the syndrome
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported
- Other eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis, elevations in BUN or serum creatinine
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061088L]

Additional information available from
Eli Lilly and Company, Indianapolis, Indiana 46285
PV 2351 AMP

Lilly
Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

© 1988, ELI LILLY AND COMPANY
CR-5012-B-849345

Physician's Recognition Awards

Forty-one MSMA members qualified for the MSMA-AMA Physician's Recognition Award during November 1988. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Boone

George D. Amromin, *Columbia*
Lewis J. Garrotto, *Columbia*
Curt M. Vogel, *Columbia*

Buchanan

John L. Mothershead, *St. Joseph*

Cole

Curtis Cox, *Jefferson City*

Franklin-Gasconade-Warren

Dilip Banerjee, *Washington*

Greene

John E. Bartlett, *Springfield*
William D. Ludwig, *Springfield*

Jasper

Paul E. Hilton, *Joplin*
Clarence A. Martin, *Joplin*

Metro. Med. of Greater Kansas City

James K. Bradley, *Kansas City*
Robert H. Durie, *Kansas City*
Joseph Kanarek, *Kansas City*
William B. Mangum, *Kansas City*
Everett M. Murphy, *Kansas City*
Walter F. Ricci, *Kansas City*
Dasari Suseela, *Kansas City*

St. Charles-Lincoln

Irene M. Minkoff, *St. Peters*

St. Louis Metropolitan

Robert M. Al-Aly, *Des Peres*
Kerry L. Bernardo, *Clayton*
John D. Blair, *St. Louis*
Olga M. Blair, *St. Louis*
Arnold S. Block, *St. Louis*
Michael F. Burns, *St. Louis*
Juan Carden, *St. Louis*
Guillermo Geisse, *St. Louis*
Virginia M. Herrmann, *St. Louis*
John E. Hironimus, *St. Louis*
Simon Horenstein, *St. Louis*
Laura R. Hulbert, *St. Louis*
Allan J. Jacobs, *St. Louis*
Glen P. Johnston, *Bonne Terre*
James H. Jones, *St. Louis*
Raymond M. Keltner, *St. Louis*
Joseph J. Lauber, *St. Louis*
Levy M. Maravilla, *St. Louis*
Charles D. Meadows, *St. Louis*
Thomas F. Richardson, *St. Louis*
Herman Shyken, *St. Louis*
Julian N. Verde, *St. Louis*
Laurence C. Welsh, *St. Louis*

MAJOR OPPORTUNITIES FOR HEALTH PROFESSIONALS.

The Army Medical Department represents the largest comprehensive system of health care in the United States, offering unique advantages to student, resident and practitioner in the following professions:

CARDIOLOGY and RADIOLOGY

As an Army Officer, you will receive substantial compensation, an annual paid vacation, and will participate in an excellent noncontributory retirement plan.

For more information, fill in the form below and mail to the address provided, or call:

(314) 263-0378 (Collect calls accepted.)

ARMY MEDICINE. BE ALL YOU CAN BE.

PLEASE SEND MORE INFORMATION ON OPPORTUNITIES IN THE ARMY MEDICAL DEPARTMENT.

Mail to: AMEDD Personnel, Procurement Agency
USA/DRC (CPT Mack)
1220 Spruce Street
St. Louis, MO 63102-1187

NAME AGE
ADDRESS
CITY STATE ZIP
PHONE
SCHOOL ATTENDED/ATTENDING
GRADUATION DATE DEGREE
SPECIALTY/AREA OF INTEREST

New Members

- **Robert M. Byrne, MD,** 3219 Meramec St., St. Louis 63118, has become a member of the St. Louis Metropolitan Medical Society. Dr. Byrne received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1985. He completed his residency at the University of California-Davis VA Martinez, Martinez, CA. Dr. Byrne specializes in internal medicine.

- **A. Basit Chaudhari, M.D.,** 66 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Chaudhari obtained his medical degree at Punjab Pakistan in 1959. He completed his residency at the Royal College of Surgeons, Edinburgh, England. Dr. Chaudhari specializes in neurology.

- **Dennis G. Colbert, M.D.,** 3908 S. Grand, St. Louis 63118, has become a member of the St. Louis Metropolitan Medical Society. Dr. Colbert obtained his medical degree at Tulane University in 1984. He completed his residency at Vanderbilt University, Nashville, TN. Dr. Colbert specializes in internal medicine.

- **Richard E. Crandall, M.D.,** 1585 Woodlake Drive, Chesterfield 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Crandall obtained his medical degree at George Washington University in 1982. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Crandall specializes in plastic and reconstructive surgery.

- **Charles F. Garvin, M.D.,** 232 S. Woods Mill Road, Chesterfield 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Garvin received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1982. He completed his residency at Washington University, Jewish Hospital, St. Louis, MO. Dr. Garvin specializes in radiology.

- **John W. Gay, M.D.,** One Hospital Drive, Dept. of OB/GYN, University of Missouri Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Gay received his preliminary education at the University of Iowa and obtained his medical degree at the University of Iowa in 1978. He completed his residency at the University of Texas Medical Branch, Galveston, TX. Dr. Gay specializes in obstetrics/gynecology.

- **Derek D. Hughes, M.D.,** 108 Green Meadows, Columbia 65203, has become a member of the Boone County Medical Society. Dr. Hughes received his preliminary education at St. Edwards College of Liverpool, UK and obtained his medical degree at Liverpool University, UK in 1958. He completed his residency at the Missouri Institute of Psychiatry. Dr. Hughes specializes in psychiatry.

- **Marek B. Lepkowski, M.D.,** 3401 Berrywood Drive, Columbia 65203, has become a member of the Boone County Medical Society. Dr. Lepkowski obtained his medical degree at the Medical Academy of Poland-Warsaw in 1977. Dr. Lepkowski completed his residency at St. Louis University, St. Louis, MO. Dr. Lepkowski specializes in urology.

- **Mignon M. Makos, M.D.,** 510 Francis, St. Joseph 64501, has become a member of the Buchanan County Medical Society. Dr. Makos received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at UMKC in 1983. She completed her residency at Creighton University Hospital, Creighton, NE. Dr. Makos specializes in neurology.

- **Nancy J. McCullough, M.D.,** 401 Rolla Street, #2, Rolla 65401, has become a member of the Mid-Missouri Medical Society. Dr. McCullough received her preliminary education at Knox College and obtained her medical degree at Washington University School of Medicine in 1965. She completed her residency at Boston Veterans Hospital, Boston, MA. Dr. McCullough specializes in anesthesia.

- **Daniel J. McGraw, M.D.,** 4960 Audubon Ave., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. McGraw obtained his medical degree at the Johns Hopkins University School of Medicine in 1985. He is completing his residency at Barnes Hospital, St. Louis, MO. Dr. McGraw specializes in surgery.

- **Mitchell F. Minana, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Minana obtained his medical degree at the University of Missouri-Columbia in 1984. He completed his residency at Cook County Hospital, Chicago, IL. Dr. Minana specializes in anesthesiology.

- **Russell J. Otto, M.D.,** One Hospital Drive, University of Missouri Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Otto received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the UMC School of Medicine in 1988. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Otto specializes in general surgery.

- **Larry L. Penney, M.D.,** N625 Health Sciences Building, University of Missouri Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Penney received his preliminary education at Hastings College and obtained his medical degree at the University of Nebraska in 1967. He completed his residency at William Beaumont Army Medical Center, El Paso, TX. Dr. Penney specializes in obstetrics/gynecology.

- **Houman Sabahi, M.D.,** 5325 Faraon St., St. Joseph 64501, has become a member of the Buchanan County Medical Society. Dr. Sabahi received his preliminary education at Portland State University and obtained his medical degree at Oregon Health Science University in 1983. He completed his residency at the City of Faith Medical Center, Tulsa, OK. Dr. Sabahi specializes in diagnostic radiology.

- **Craig J. Santolin, M.D.,** 1883 G. Waterfront Drive, Columbia 65202, has become a member of the Boone County Medical Society. Dr. Santolin received his preliminary education at Loyola University and obtained his medical degree at the American University of the Caribbean in 1982. He completed his residency at St. Luke's Hospital, St. Louis, MO. Dr. Santolin specializes in cardiology.

- **Mir F. Shuttari, M.D.,** 6150 Oakland, St. Louis 63139, has become a member of the St. Louis Metropolitan Medical Society. Dr. Shuttari obtained his medical degree at the Gandhi Medical College, India in 1980. He is completing his residency at Deaconess Hospital, St. Louis, MO. Dr. Shuttari specializes in internal medicine.

- **Gita G. Sprague, M.D.,** 5301 Faraon, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Sprague received her preliminary education at Missouri Western State College and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1985. She completed her residency at the University of Missouri-Kansas City and Affiliated Hospitals, Kansas City, MO. Dr. Sprague specializes in internal medicine.

- **Gregory A. Tobin, M.D.,** Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Tobin received his preliminary education at the University of South Dakota and obtained his medical degree at Ohio State University in 1988. He completed his residency at Wesley Medical Center, Wichita, KS. Dr. Tobin specializes in general surgery.

- **Richard J. Walsh, M.D.,** 3917 Sherman, St. Joseph 64501, has become a member of the Buchanan County Medical Society. Dr. Walsh received his preliminary education at the University of Nebraska and obtained his medical degree at the University of Nebraska in 1978. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Walsh specializes in dermatology.

- **Larry K. Watts, M.D.,** 1322 N. 36th, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Watts received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1984. He completed his residency at Jacksonville Health Education Program, Jacksonville, FL. Dr. Watts specializes in obstetrics/gynecology.

■ Student Members

St. Louis University

Carole Anderson
Donna M. Andres
Kenneth A. Ashton
Mary J. Babka
Darlene E. Bangert
Jay C. Beiswanger
Rick Bowen
Stephen Brennan
Bryan J. Brindley
James B. Brown, Jr.
Rosemary Cannistraro
Steven J. Carabine
Perrin Curran
Grace H. Cheng
Eric S. Colton
Janelle A. Czajkowski
Margaret J. Davis
Robert Dong
Christy Drivdahl
Randell Fenton
Julia Fong
Andrew Fragen
Barney Fritz
Gil Gross
Ruth P. Gullotta
Michele M. Haag
Ramzi Hajjar
Thomas F. Heston
Klaus A. Hilgarth
Eleanor Ho
David Joyce
Doug Kartel
Afshin Khatibi
Jeannette Kierce
Deborah A. Konkol
Andrew J. Koropey
David M. Lingle
Gerald A. Maguire
Mina Majidian
Gina M. Maminta
Ron McCann
Kiren Mehra
Stephen Miller
Cynthia J. Mueller
Robert M. Nee
John E. Parson, Jr.
Angela L. Piquard
Jason Rohrer
Somchai Saelee
Edmund L. Schmulbach
Sara Schweigert
Nancy M. Angenend Serrot
Margaret J. Slover
Derek Towery
Mike Tran
Mickey M. Tseng
Samuel D. Yanusskey
Larry Yin
Mary Younglove
Andrea P. Zaman

Washington University

J. Kevin Donahue
Carlen A. Gomez

University of Missouri-Kansas City

Rod Woerther

University of Missouri-Columbia

Rifat S. Akhtar
Thomas J. Alcox
David R. Andes
Andrea A. Arvan
Patricia L. Barker
Davis L. Barnes, Jr.
David B. Beckemeier
Bruce G. Bellamy
Susan C. Birmingham
James J. Borders
Marcella R. Bothwell
Steven A. Carder
Aaron B. Carter
Jonathan L. Clark
Stefan B. Craig
Frank A. Diyincenzo
Louis R. Feldenberg
Rebecca L. Flanagan
Santosh George
K. Douglas Green
Carolyn S. Hathaway
David R. Hunter
Matthew T. Jung
Lisa M. Jungkuntz
Charles E. Keeney, Jr.
Michael R. Lasky
Randall C. Latorre
Paul I. Lindner
Timothy P. Manson
Bridget McCandless
Keith A. Meyer
Amy J. Owen
Karuna Patibandla
Robert L. Peskind
Kenneth G. Petty
Jeff T. Reed
Brian Q. Rudman
Thomas E. Saak
Robert B. Sexe
Michael J. Shanker
Teena L. Sharrock
Dan M. Silverstein
Sam R. Simms
D. Scott Smithpeter
Leigh A. Sulzberger
Jane E. Taylor
Sarvam P. Terkonda
Jerome E. Thurman
Sarah G. Tuli
Michael J. Wackowski, Jr.
Mary A. Wardell
Stephanie E. Womack
Dennis E. Younglove
John A. Zimmerschied

Medical School News

The University of Missouri-Columbia

■ **Theresa Boley, R.N., B.S.N.,** research associate in the division of thoracic surgery, in September presented "Innovations in Cardiac Surgery: Care of the Patient Requiring Centrifugal Ventricular Assistance" at the Third International Intensive Care Nursing Conference in Montreal, Canada.

■ **Jack Curtis, M.D.,** associate professor of surgery and chief of thoracic surgery; **Joseph Walls, M.D.,** associate professor; **Richard Schmaltz, M.D.,** clinical assistant professor; and **Theresa Boley, R.N., B.S.N.,** research associate, in July presented "Post-Cardiotomy Ventricular Assistance with the Sarns Centrifugal Pump" at the Seventh European Congress on Diseases of the Chest in Dublin, Ireland.

■ **Thomas Feldbush, Ph.D.,** professor of microbiology and medicine and assistant dean for research, is the director of the Cell and Immunobiology Core Facility, a cooperative venture with Harry S. Truman Memorial Veterans Hospital, which was officially opened in November. Dr. Feldbush also is associate chief of staff for research and development at the VA hospital. Funded by the University's molecular biology program, the facility has four components, or "cores," that provide services for VA researchers and investigators from the University's schools of Medicine and Veterinary Medicine, the colleges of Agriculture and Human Environmental Sciences and the biological sciences division within the College of Arts and Science. The four cores are a flow cytometer lab, a tissue culture reagent lab and two hybridoma labs.

■ **Herbert A. Ferrari, M.D., J.D.,** clinical professor of anesthesiology, delivered a talk titled "The Medical Malpractice Crisis: Is there any hope for the future?" to the Interamerican College of Physicians and Surgeons in Washington in October.

■ **George J. Fuchs, M.D.,** has joined the Department of Obstetrics and Gynecology on a half-time appointment as a clinical associate professor and will serve as the director of the Green Meadows Women's Center. Dr. Fuchs earned his medical degree and completed his residency at the University of Wisconsin in Madison and has served on the Missouri faculty in various capacities since 1956. Dr. Fuchs, who is on the gynecology staff at Ellis Fischel State Cancer Center, is a fellow in the American College of Obstetrics and Gynecology and is currently the chairman of the Missouri section of that organization.

■ **Bruce E. Harry, M.D.,** associate professor of psychiatry and adjunct associate professor of law, participated in several discussions at the 19th annual meeting of the American Academy of Psychiatry and the Law in San Francisco in October. Among other things, Dr. Harry chaired a workshop on "Research in Forensic Psychiatry II" and chaired a meeting of the Education Committee. He also attended the academy's midwest chapter meeting as president-elect and was appointed an associate editor of the "Bulletin of the American Academy of Psychiatry and the Law."

■ A group of 26 medical students served as AIDS educators to more than 300 students and faculty Nov. 17 at rural Tipton High School. The medical students are part of Students Teaching AIDS To Students, or STATS, a program that was designed by medical students **Grant Haven** at Missouri and **Jeff Stolz** at the University of North Carolina. The project, started locally in January, has been picked up by the American Medical Student Association, a group that represents more than 27,000 students at 148 medical schools throughout the United States.

The sessions at Tipton involved more teens and medical students working together than at any time in the Missouri program's history. "Because AIDS education is something new, there is a great need," says project coordinator **Amy Slagle,** a post-sophomore fellow. "Little has been done to address the need. Our goal is to reach as many rural areas as we can."

STATS is directed at seventh- through 12th-graders because teens tend to explore their sexuality, experiment with drugs and have a sense that they aren't vulnerable to fatal diseases such as acquired immune deficiency syndrome, Haven says.

The STATS program is designed to present facts and answer questions about AIDS and then reinforce the information through interactive games and exercises.

■ **Theodore F. Henrichs, Ph.D.,** professor of psychiatry, has been appointed to be a consultant to Oxford University Press on a book about the Minnesota Multiphasic Personality Inventory II, which will be published this year.

■ The Center for the Study of Aging, directed by **Stan Ingman, Ph.D.,** associate professor of family and community medicine, together with University Extension sponsored the University's first live, nationwide videoconference on Nov. 5. The videoconference, titled "Sharing the Burden: Meeting the Challenge of Alzheimer's in Local Communities," originated in Columbia and was sent via satellite to more than 100 communities across the country.

■ **Ramesh Khanna, M.D.,** associate professor of nephrology, was chosen by the India Medical Association, Illinois, to be the recipient of the Distinguished Physician's Award for 1988 for outstanding academic achievements in the field of medicine. Dr. Khanna received the award in November at the association's annual meeting in Chicago.

■ **Hyun Dju Kim, Ph.D.,** professor and chairman of pharmacology, presented "Metabolic Development in Erythropoietin Dependent Maturation of Erythroid Cells" at the seventh International Conference on Red Cell Metabolism and Function, at the University of Michigan Medical Center in Ann Arbor in October.

■ **Ezio A. Moscatelli, Ph.D.,** associate professor of biochemistry, in November was chosen by students to receive a Gold Chalk Award, an honor from the Graduate Professional Council. The Gold Chalk Awards were established in 1988 for "outstanding faculty who have contributed to teaching, training, motivation, development and leadership," says Dennis Bobilya, GPC secretary. Adds GPC President Sarah McElroy, "We want to show the faculty that their work is appreciated." Winners were selected by a 10-member committee and represent the three professional schools and the six graduate school divisions.

- **Gilbert Ross Jr., M.D.,** professor of surgery and chief of the division of urology, has been elected president of the board of directors of the Midwest Organ Bank. Dr. Ross also is president-elect of the south central section of the American Urological Association Inc.

- **Scott W. Snyder, M.D.,** in October joined the departments of Obstetrics and Gynecology and Anesthesiology as an assistant professor. Dr. Snyder, who earned his medical degree from the Washington University School of Medicine, had been an associate obstetrician at the Kneibert Clinic in Poplar Bluff.

- **John T. Turner, Ph.D.,** assistant professor of pharmacology, has been awarded a renewal of $110,267 for his NIH grant titled "VIP Receptors and Submandibular Gland Function."

- **James M. A. Weiss, M.D.,** professor and chairman of psychiatry, in October presented a paper on "Diagnostic Criteria for Psychopathy" and participated in a panel discussion at the international meeting of the World Psychiatric Association in Washington, D.C. **Niels C. Beck, Ph.D.,** associate professor of psychiatry, co-authored the paper.

University of Missouri-Kansas City

- Provost emeritus **E. Grey Dimond, M.D.,** was honored at a Dec. 9 reception and program in honor of a dual anniversary: that of his twentieth anniversary since joining the University and founding UMKC School of Medicine and his seventieth birthday. Several hundred people attended the celebration.

- **Richardson K. Noback, M.D.,** professor and docent, this fall used a 90-day extension on a three-year $300,000 grant from the Health and Human Services Department, to help continue to get a "durable product" created with the resources of the grant into the health-care delivery system. With the grant, the creation of the Missouri Geriatric Education Center (MGEC), was made possible. And, almost three years later, from their field teaching experience with "learning faculty" MGEC staff members have created 23 self-study modules which will help perpetuate these teaching efforts. The self-study units are divided into discipline-specific categories encompassing nursing, medicine, pharmacology, dental, and psychosocial perspectives. Nine academic divisions on two University of Missouri campuses joined efforts in the MGEC and provided the teaching faculty members who guided its activities which included short- and intermediate-term intensive instructional programs. The self-study modules were prepared through the efforts of a multidisciplinary team and are expressed in behavioral terms. An instructor does not have to be an expert in a subject area to make use of the units.

- Two faculty members associated with the Missouri Geriatric Education Center have had abstracts accepted for presentation at the Association for Gerontology in Higher Education's fifteenth annual meeting in Tampa, Fla., in March 1989. **Steven Krantz, Ph.D.,** assistant professor of nursing, will present "A System of Responsive Training Support in a Rural State: The Use of Focused Modular Instruction in Geriatrics and Gerontology." **Richardson K. Noback, M.D.,** professor of medicine, will present "Eighteen Self-Study Packages Designed to Meet Regional Geriatric Education Needs."

- **Kaaren C. Douglas, M.D.,** assistant professor of community medicine and family practice, along with **M.C. Hosokawa** and **F.H. Lawler** have co-authored *A Practical Guide to Clinical Teaching in Medicine,* published in 1988 by the Springer Co. in New York.

- **William Barnes, Ph.D.,** professor and director of microbiology was recently awarded the Distinguished Service Award by the Southwestern Association of Clinical Microbiology. The association, composed of clinical microbiologists in the six-state area of Texas, Louisiana, Oklahoma, Arkansas, Kansas, and Missouri, gives the award to individuals who have made outstanding contributions in the field of clinical microbiology.

- **Milton B. Ozar, M.D.,** clinical professor of surgery, recently was elected president of the South Central Section of the American Urological Association.

- **Joseph F. Waeckerle, M.D., FACEP,** was appointed editor of the *Annals of Emergency Medicine* by the American College of Emergency Physicians (ACEP). A clinical professor at UMKC School of Medicine, Dr. Waeckerle has more than 15 years of service to the journal, ACEP, and several other emergency-medicine-related organizations, including the Emergency Medicine Resident's Association, which he founded in 1974. *Annals* is the largest peer review journal in the field of emergency medicine.

- Clinical associate professors **James S. Bower, M.D.,** and **Charles J. Brooks, M.D.,** are co-authors of "Performance of a Demand Oxygen Saver System During Rest, Exercise, and Sleep in Hypoxemic Patients." The article was published in the July 1988 issue of *Chest*.

- **Bob In-Yu Yang, Ph.D.,** associate professor, and **David J. Harris, M.D.,** professor, are recipients of a $5,280 Sarah Morrison research grant for "Correlation of Vitamin B_6 Concentrations and Hypophosphatasia."

- **Barbara Quirk, Ph.D.,** assistant professor of Community Medicine and Family Practice, has been appointed by the Board of the Trustees of the American Hospital Association as AHA's representative to the Professional and Technical Advisory Committee on Accreditation Programs for Long-Term Care Facilities of the Joint Commission on Accreditation of Health Organizations.

- With a $72,000 award from the National Institute of Cancer Research, **Tawfik M.A. ElAttar, Ph.D.,** professor, is conducting an investigation on "The Effect of Vitamin A Derivatives and Unsaturated Fatty Acids on Prostaglandin Formation in Oral Cancer Cells."

- **Steven D. Waldman, M.D.,** clinical associate professor, has been named a member of the American Society of Anesthesiology Committee on Local Anesthesia and Pain.

Washington University

- Researchers at Washington University School of Medicine in St. Louis are seeking volunteers to participate in a study testing a new treatment for dermatitis.

The study involves testing a new drug for people with atopic dermatitis (AD), a chronic itchy rash that often appears behind the knees, in the creases of elbows or around the neck. People who suffer with AD or their family members may also have allergies such as asthma or hay fever.

Principal investigator for the study is **Ann Martin, M.D.**, instructor in dermatology. The project is funded by Rorer Central Research, makers of the drug.

To be eligible for the study, participants need to be over the age of 18; women should be postmenopausal or unable to have children because of a tubal ligation. Volunteers will apply the test drug to their rash three times a day and will be seen weekly for no more than six weeks at the dermatology outpatient center, located in Barnard Hospital.

For more information, call Sharon Jenkins at the dermatology center, 314/362-2643.

- The Coleman/Fannie May Candies Foundation of Chicago has donated $7,500 to the Department of Microbiology and Immunology at Washington University School of Medicine.

The gift was used to support a departmental conference at which faculty, postdoctoral fellows and students met to present their latest research. According to **Milton Schlesinger, Ph.D.**, acting chairman and professor of the Department of Microbiology and Immunology, this kind of conference provides the best possible forum for faculty and students to exchange scientific information and to form new collaborative research programs.

There were 75 members of the department at this year's conference. An evening discussion on ethics in science was led by **Joseph Davie, M.D., Ph.D.**, past chairman of the department and now vice president for research at G.D. Searle & Co.

St. Louis University

- A $2,000 grant awarded to the chairman of Health Information Management at St. Louis University Medical Center will fund the first resource guide for prospective students and graduates in this field.

Shirley Anderson, Ph.D., RRA, associate professor and chairman of the department of Health Information Management at the School of Allied Health Professions, St. Louis University Medical Center, was awarded the grant to compile the manual. The grant was funded by the American Medical Record Association.

Dr. Anderson will be assisted by **K. Jody Smith, M.S.M., RRA**, education coordinator. They will compile profiles on 50 positions that involve the skills of medical record graduates. Positions range from the educational and legal fields to veterinary medicine and correctional care.

- **Barry M. Chapnick, Ph.D.**, professor of pharmacology, St. Louis University School of Medicine, has been awarded a five-year, $650,000 grant by the National Heart, Lung and Blood Institute. He will continue his study of vascular control mechanisms.

Specifically, Dr. Chapnick will investigate the participation of leukotrienes in the control of blood vessel tone. Dr. Chapnick joined the medical school faculty in 1980. He earned his doctorate degree at the University of Chicago in 1971.

- The National Institutes of Health has awarded joint, four-year grants totalling $1.3 million to researchers at St. Louis University Medical Center and Emory University, Atlanta.

William S. M. Wold, Ph.D., professor of molecular virology, Institute of Molecular Virology, St. Louis University Medical Center, will collaborate with **Linda R. Gooding, Ph.D.**, professor of microbiology and immunology at Emory University. They will examine how human adenoviruses, viruses capable of inducing malignant tumors in animal models, have evolved mechanisms that enable them to evade anti-viral defense functions of the immune system.

- **Subir K. Bose, Ph.D.**, professor of microbiology, St. Louis University School of Medicine, has been awarded a two-year, $103,000 grant from the National Institutes of Health to continue his work on chlamydia. His research is part of a consortium study with the University of Arkansas for Medical Sciences, Little Rock, Ark.

Dr. Bose will investigate how cultured human cells treated with estrogen become more susceptible to human chlamydia strains.

- **Akihiko Noguchi, M.D.**, associate professor of pediatrics at St. Louis University School of Medicine, has been awarded a $87,500 grant from Ross Laboratories to study surfactant TA in premature infants with Respiratory Distress Syndrome (RDS).

RDS is one of the leading causes of death in premature infants. The purpose of the study is to determine how efficiently intratracheally given surfactant is in reducing respiratory problems in premature infants.

- The 1988 *David M. Worthen Award for Academic Excellence* has been presented to **Francis A. Zacharewicz, M.D.**, chief of staff at St. Louis VA Medical Center, assistant dean for continuing medical education at St. Louis University School of Medicine, and director of the VA's Continuing Education Center.

The award is being presented to Dr. Zacharewicz for providing leadership and innovation in the development and enhancement of an integrated national health professions continuing educational system for the VA's department of medicine and surgery.

Dr. Zacharewicz's contributions within the past two decades have resulted in a significant improvement in the quality of patient care delivered within the Veteran's Administration.

Between 1964 and 1972, he held several key positions at the St. Louis VA Medical Center, including chief of endocrinology and metabolism, chief of the diabetes clinic, coordinator for medical education and allied health training, and associate chief of staff for education.

Dr. Zacharewicz also holds appointments in the department of internal medicine at St. Louis University School of Medicine.

- **Vallee L. Willman, M.D.**, C. Rollins Hanlon Professor and chairman of the department of surgery, St. Louis University School of Medicine, is the winner of the 1988 Health Care Leadership Award, presented annually by the Hospital Association of Metropolitan St. Louis.

The award, presented in October at the annual dinner meeting, recognizes individuals who demonstrate outstanding leadership and dedication in furthering the interests of quality health care in the St. Louis area.

A member of the American College of Surgeons, Dr. Willman was the 1987 winner of the Distinguished Service Award, the organization's highest honor.

Dr. Willman has been responsible for dramatic advances in cardiovascular surgery and cardiac research and headed the surgical team that performed the first heart transplant in the lower Midwest, in 1972. Through his leadership, St. Louis University Medical Center was one of only seven centers in the country to perform heart transplants during that period.

Dr. Willman has been equally successful in his teaching and research and has continuously held academic appointments in the school of medicine's department of surgery since 1957, becoming the chairman of the department in 1969.

- **Steven Jay Fliesler, Ph.D.**, associate professor in the departments of ophthalmology and biochemistry, St. Louis University School of Medicine, has been awarded a $197,000 grant from the National Eye Institute.

Dr. Fliesler will continue his work on photo receptor dystrophies, pursuing his hypothesis that some forms of hereditary retinal degenerations may involve genetic defects in the synthesis of glycoproteins, resulting in blindness.

He has shown that disrupting normal glycoprotein metabolism in the retina by the use of experimental drugs results in a blinding disorder that mimics certain human photo receptor dystrophies.

Dr. Fliesler came to the medical center from Bascom Palmer Eye Institute and the department of biochemistry and molecular biology at the University of Miami School of Medicine, Miami, Fla. Dr. Fliesler earned his doctorate degree in biochemistry at Rice University, Houston, Texas in 1980.

- **Timothy S. Loth, M.D.**, assistant professor of orthopedics at St. Louis University School of Medicine, has been appointed chief of hand and microvascular surgery at St. Louis University Medical Center.

Dr. Loth received his medical degree from Albert Einstein College of Medicine, New York in 1980 and completed his residency at the Fitzsimmons Army Medical Center, Aurora, Colo. in 1985. He completed a fellowship in hand, upper extremity and microsurgery at the Hand Surgery Associates of Indiana in 1987. He was a member of the United States Army from 1976 to 1987.

Dr. Loth is board certified with the American Board of Orthopedic Surgery and has special certification in advanced cardiac and trauma life support. He has been recognized for his work with several distinguished awards, including the Mid-Central States Orthopedic Society Resident Award in 1984; the Army Commendation Medal in 1984; Outstanding Young Man of America Award in 1985; and the Army Commendation Medal First Oak Leaf Cluster in 1987.

- **Lysle E. Johnston, Jr., D.D.S., M.S., Ph.D.**, chairman of the Department of Orthodontics, St. Louis University Medical Center, has been awarded a five-year grant totaling $600,000 from the National Institute of Dental Research, Department of Health and Human Services.

The grant supports a study comparing a variety of contemporary orthodontic treatments commonly used to correct the dental malocclusion that features protrusive incisors, the most challenging problem for contemporary North American orthodontists.

- **Thomas W. Martin, M.D., Ph.D.**, assistant professor of pathology at St. Louis University School of Medicine, was awarded a three-year, $292,650 grant from the National Heart, Lung and Blood Institute to study the mechanisms involved in the regulation of the synthesis of lipid mediators by the cells that line the inner surface of blood vessels throughout the body.

The importance of the study is to determine how the mediators that are synthesized help to prevent abnormal blood clotting and leakage of fluid out of blood vessels into tissues.

- **George E. Thoma, M.D.**, former vice president for St. Louis University Medical Center, has received the University of Dayton's 1988 distinguished alumnus award for his contributions to the field of nuclear medicine, health care administration and medical education.

A native Daytonian, Dr. Thoma graduated from the University of Dayton in 1943 and received his M.D. from St. Louis University in 1947.

Dr. Thoma is a consultant for a number of medical and nuclear agencies including the Health Physics Division of Oak Ridge National Laboratory; the U.S. Public Health Service, Division of Radiological Health; and Division of Compliances, U.S. Atomic Energy Commission.

After his retirement from the medical center vice presidency in 1986, he spent 18 months in Paris studying the teaching of ambulatory care in western European medical schools. He currently is a member of the commission on Catholic Health Care and director of Mercy Health Systems (Detroit Province), Alexian Brothers Health Systems and ASC Health Systems.

- **Douglas J. McDonald, M.D.**, assistant professor of orthopedics at St. Louis University School of Medicine, has been appointed chief of the orthopedic oncology section at St. Louis University Medical Center. He specializes in tumors and total joint replacement.

Dr. McDonald received his medical degree from the University of Minnesota School of Medicine, Minneapolis, in 1982. He completed his residency in orthopedic surgery and a fellowship in orthopedic oncology at the Mayo Graduate School of Medicine, Rochester, Minn., in 1987.

In 1988, Dr. McDonald completed a six month fellowship in orthopedic oncology at the Rizzoli Orthopedic Institute, Bologna, Italy, where he was awarded the Hatcher Pathology Fellowship by the American Orthopedic Association.

WANTED:

- **Opinions**
- **Comments**
- **Suggestions**
- **Ideas**

Submit them in writing to:

**Letters to
the Editor
Missouri Medicine
P.O. Box 1028
Jefferson City, MO
65102**

One Wednesday morning is all it takes to ensure that Medicine has a voice in Jefferson City. Call 314/636-5151 & ask about PIP.

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

January

9 **City-Wide Radiology Conference** — Location: St. Louis University, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

14-19 **Rheumatology for the Primary Care Physician** — Location: Copper Mountain Resort, Colorado. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6891.

19-21 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

21-22 **Breast Imaging Update** — Location: San Francisco, CA. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

23-27 **Diagnostic Radiology Seminars** — Location: Ixtapa, Mexico. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

27 **Public and Private Sector Responses to the Health Cost and Quality Management Dilemma of the 1990s** — Location: L'Enfant Plaza, Washington, D.C. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

29-Feb. 3 **Aggressive Management of Your Retirement Plan and Valuation of Your Practice** — Location: Virgin Grand Beach Hotel, St. John, Virgin Islands. Contact: James H. McCray, DDS, MAGD, seminar coordinator, Professional Education Society, 231-B Flamingo Road, Mill Valley, CA 94941. 1/800-872-3070.

February

4 **Cardiology Update: Looking Toward the 1990's** — Location: Adam's Mark Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 **MRI in the Pelvis: Staging and Monitoring Response Time in Therapy** — Location: Mallinckrodt Institute of Radiology. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110.

19-24 **Diagnostic Imaging Update** — Location: Park City, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

23-25 **9th Annual Conference on Peritoneal Dialysis** — Location: Loews Anatole Hotel, Dallas, TX. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

24-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

March

1-4 **1989 Annual Meeting of the American College of Legal Medicine** — Location: Marriott's Rancho Las Palmas Resort, Rancho Mirage, CA. Contact: the American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

4-11 **Seventh Winter Congress, Diagnostic Imaging** — Location: Courchevelle, France. Contact: Winter Congress, 21915 Roscoe Blvd., Ste. 222, Canoga Park, CA 91304. 818/700-9821.

5-10 **Magnetic Resonance Imaging Update 1989-Winter Conference** — Location: Snowbird, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

6 **Internal Medicine Review: Dermatology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis.

Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

10-11 **34th Urology Seminar** — Location: Hyatt Regency Hotel, Kansas City, MO. Contact: Barry — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

11-12 **Family Practice Update** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

13 **Internal Medicine Review: Allergy/Immunology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

18-25 **Traveling Medical Education Course** — Location: Snowmass, Colorado. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 222 W. Gregory Blvd., Suite 323, Kansas City, MO 64114. 816/523-3383.

27 **Internal Medicine Review: Neurology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

28-30 **The Impact of Cardiac Surgery on the Quality of Life: Neurological and Psychological Aspects** — Location: The New York Hilton, New York, NY. Contact: Ann J. Boehme, CMP, CME Office, Long Island Jewish Medical Center, New Hyde Park, New York, NY 11042. 718/470-8650.

31-April 2 **Organizational Systems** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

April

3 **Internal Medicine Review: Oncology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

6-7 **16th Annual Obstetrics & Gynecology Symposium** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

10 **Internal Medicine Review: Hematology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

13 **Issues Facing the Diffusion of Medical Technology** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

14-15 **Midwest Conference on Eating Disorders** — Location: Hilton Plaza Inn, Kansas City. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

17 **Internal Medicine Review: Nephrology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 **Internal Medicine Review: Cardiology** — Location: Steinbereg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

27-28 **Critical Care Update** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

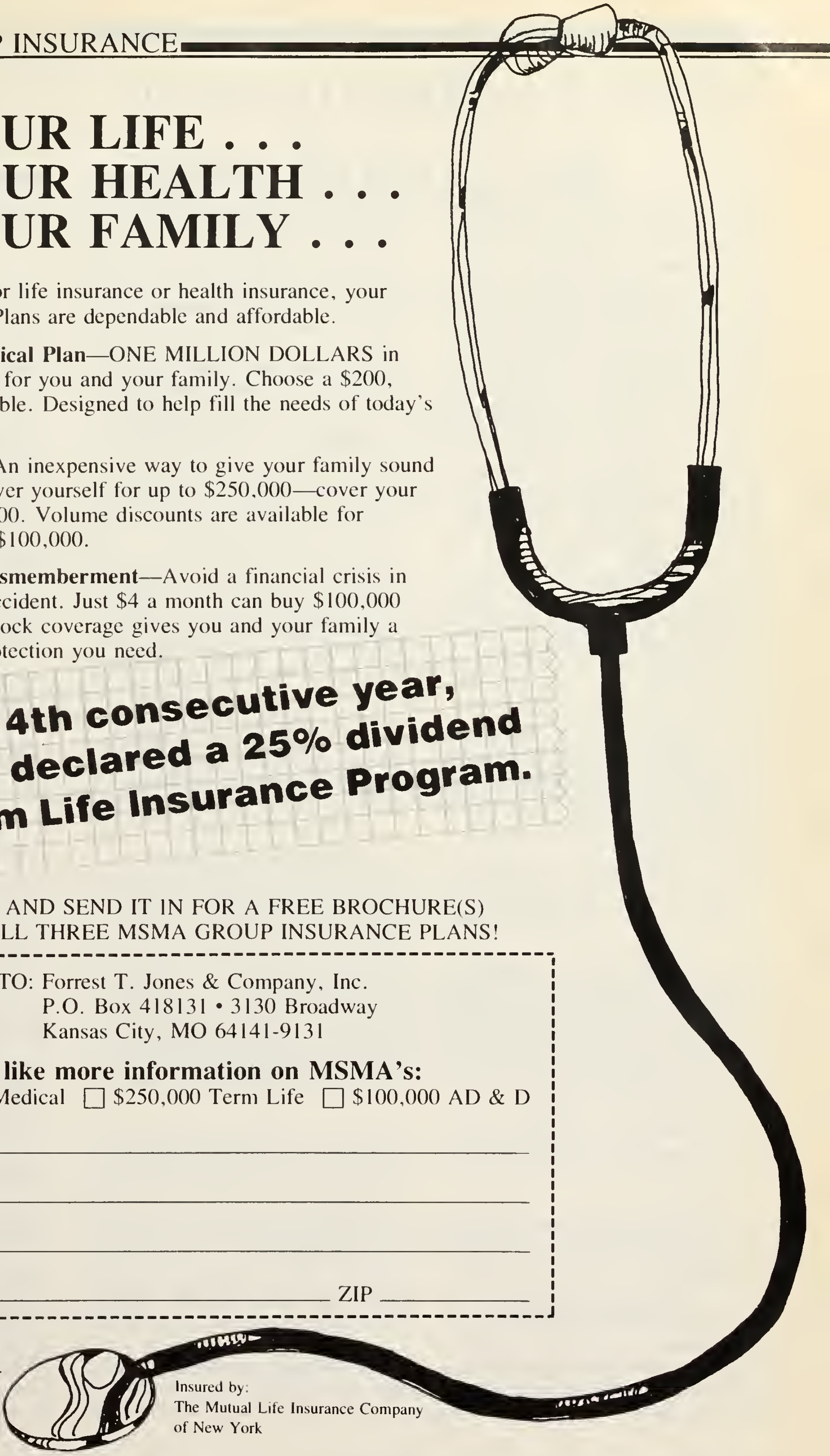
May

1 **Internal Medicine Review: Gastroenterology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

4-6 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Engel, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

4-7 **Psychiatry Legal Environment: Medicine's Response** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Stereotactic Breast Biopsy** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.



MSMA GROUP INSURANCE

FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $200, $500, or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S) ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:

☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ____________________

ADDRESS ____________________

CITY ____________________

STATE ____________________ ZIP __________

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

Insured by:
The Mutual Life Insurance Company
of New York

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in Missouri Medicine is protected by copyright.

Manuscripts should be submitted to the editor, Donald G. Sessions, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Air Force **18**

Army Medicine **44**

Bounds, Poger & O'Donnell **6**

Eli Lilly **42B**

Forrest T. Jones **53**

Fred S. James **26**

Marion Labs **42A**

Medic Computer Systems **16**

Medical Defense Associates **40**

Medical Protective Company **18**

MOMEDICO **2**

OMH Medical Center **57**

Palisades Pharmaceuticals **20**

PIE Mutral Insurance Company **13**

Risk Control Associates **14**

Roche Laboratories **59, 60**

United Missouri Banks **4**

Wes Woodbury **20**

Classifieds

Physicians Wanted

Family Practice, Internist, OB-GYN, and Part-Time Radiologist for multispecialty group, outskirts of St. Louis. Please send your curriculum vitae to File #13, C/O Missouri Medicine, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Indiana: Emergency department directorship opportunity is immediately available in a progressive midwest town located one hour from two major urban centers. Director has the option of straight day shifts, Monday through Friday. No on-call. Good mix of patients from pediatrics to internal medicine. Position requires clinical and administrative experience and ACLS. Annual reimbursement $85,000, occurrence malpractice insurance coverage, health, life, dental and disability insurance, allowance for professional fees and relocation expenses. For additional information, contact Cathy Long, Spectrum Emergency Care, P.O. Box 27352, St. Louis, MO 63141; 1-800-327-3982, extension 3018.

Pediatric or **Retinal Ophthalmologist,** Kansas City. Fellowship-trained Pediatric-Strabismus or Retinal Ophthalmologists to join board Certified Generalists and establish first subspecialty department. Ultramodern office with state-of-the-art equipment and vigorous growing practice. Some general Ophthalmology until subspecialty established. Ethical. Stimulating environment-clinical research — 40 papers published from our practice. Exceptional offer — salary, fringes, production incentive. Contact: John C. Hagan, III, M.D., FACS, Midwest Eye Institute of Kansas City, 2700 Hospital Drive, North Kansas City, MO 64116.

Illinois: Seeking a board certified/board eligible orthopedic surgeon, unlimited potential, fine living environment, excellent area for swimming, boating, fishing, and camping. Position carries a first-year income guarantee in the range of $120,000. A benefit package will be included. Contact Bob Suleski, 250 Regency Court, Waukesha, Wisconsin 53186, 1-800-338-7107.

Missouri: Opportunity for an emergency physician at a full-service, acute care facility located 1 hour from Kansas City. This Level II facility has a service population of 95,000 with approximately 12,000 Emergency Department annual visits. Comprehensive compensation package including professional liability insurance. For information, contact Emergency Medical Services, 3101 Broadway, Suite 1000, Kansas City, MO 64111, (800) 821-5147 or 816/561-1025.

One Psychiatrist — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board Certified or Eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, Board Certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

Emergency Medicine in IL and MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Peggy Gadue, staffing specialist. National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

ANESTHESIOLOGIST: BC/BE to join congenial group of ten anesthesiologists with CRNA's in southwestern Missouri. State-of-the-art equipment in two progressive community hospitals. Full practice range including OB, pediatrics, hearts, and neuro. Excellent benefits. Contact: **S. R. Curry, M.D., Ozark Anesthesia Associates, 3660 S. National Ave., Springfield, MO 65807.**

OBSTETRICS AND GYNECOLOGY. Confidence in this opportunity's success is high, and is reflected by the income guaranteed. Northeastern Midwest; 100,000 in metro area. Dynamic 400+ bed hospital with excellent step-up Level I nursery, state-of-the-art technological support, Level III nursery within 20 minutes. Complete package includes malpractice and full practice management services. Only board certified/board eligible specialists. Respond in confidence to: Jim Huber, Fox Hill Associates, 250 Regency Court, Waukesha, WI 53186, 1-800-338-7107.

OTOLARYNGOLOGIST — Less than 100 miles to St. Louis. Good living environment. Association with 3 BC ENT's seeking to establish second office in community with 50,000 service population, or establish an independent, fee-for-service practice. Excellent income potential. Call or write George Ivekich, 250 Regency Court, Waukesha, Wisconsin 53186, 1-800-338-7107.

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). Contact Cheryl Kelow, Personnel Director, at 816/923-5800, ext. 225.

OB-GYNs needed in several communities in Washington state. Variety of practice settings in small communities in Eastern, Central, and Western Washington and Seattle suburb. Thriving state economy due to strong airplane sales, high-tech, excellent harvest, and expanding Pacific Rim trade. Join us in the Northwest for excellent practice opportunities and life-style.

Physicians Wanted

THE FRIEDRICH GROUP, INC., 9284 Ferncliff Northeast, Bainbridge Island, WA 98110. 206/842-5248.

EASTERN WASHINGTON. Year-round golf, sunshine, Columbia River recreation. Community of 115,000 needs Family Medicine, Oncology, OB/GYN, Pulmonology, Neurology, Thoracic Surgery and Pediatrics. Variety of life-styles within minutes of hospital. River-front, ranching, agriculture, vineyards. Medical community adding new specialties. Practice support available. Excellent schools. Send CV or call Kathleen E. Street, The Friedrich Group, 9284 Ferncliff NE, Bainbridge Island, WA 98110, 206/842-5248.

EMERGENCY MEDICINE, COLUMBIA: Emergency Physician wanted for private, not-for-profit hospital in university town. Medical staff and facility are progressive and state-of-the-art. Competitive salary and benefits which include paid malpractice insurance (occurrence!), health insurance, dental insurance, educational leave and one month paid vacation. Freestanding emergency clinic and rural health clinic shifts also available. Interested physicians should send CV and letter of inquiry to Roger Willcox, M.D., FACEP, Director of Emergency Services, Boone Hospital Center, 1600 E. Broadway, Columbia, MO 65201.

OCCUPATIONAL MEDICINE PHYSICIAN — Full-time position with a well-established hospital-based occupational medicine clinic in the Kansas City area. BC/BE in Occupational Medicine desirable, but an interest in occupational health with a strong clinical background will be considered. Excellent compensation package based on guarantee plus incentive and a comprehensive benefits package. To learn more about this opportunity, send detailed resume to: FILE #11, C/O MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

CME Cruise/ Conference

1989 CME Cruise/Conferences on Medicolegal Issues & Risk Management — Caribbean, Mexico, Alaska/Canada, China/Orient, Scandinavia/Russia, Mediterranean, Black Sea, Trans Panama Canal. Approved for 24-28 CME Category 1 Credits (AMA/PRA) and AAFP prescribed credits. Excellent group rates on finest ships. Pre-scheduled in compliance with IRS requirements. Information: International Conferences, 189 Lodge Ave., Huntington Station, NY 11746. 1-800-521-0076 or 516/549-0869.

Services

Thinking About Selling Your Practice? We have the buyers and can assist in all aspects of a sale including financing and valuation. We would be happy to discuss your specific situation in an initial private meeting at no cost or obligation to you. Call, THE MEDICAL MARKETPLACE, 314/997-0535.

PHYSICIANS. Provider Placement Services specializes in the relocation of physicians throughout the U.S., with special emphasis in the southeast. Currently, we have several hospitals/clinics/groups with openings. All fees paid by employer. All inquiries kept in strict confidence. No obligation. Send C.V./Resume to: PPS, ATTN: Mr. Scott, 2221 University Blvd., West, Jacksonville, FL 32217, or call toll free 1-800-848-8722.

Investment

$5,000-$6,000: FOR PHYSICIANS — Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including Taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Position Wanted

ANESTHESIOLOGIST: Board-certified with twelve years experience available for afternoon or weekend coverage in St. Louis metropolitan area (Missouri only). Can be on regularly scheduled or as needed basis. Have my own malpractice insurance. Send inquiries to: File #17, c/o MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Practice For Sale

OB-GYN Practice in Central West St. Louis County. Good location on major cross-town arteries, accessible to Clayton, Ladue, University City and North and South County. In practice 23 years at this location. Good patient age and payment mix. Excellent collection experience. Equipment and office furnishings in excellent condition. Assistance with financing available. Inquiries to File #23, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Equipment for Sale

Medical office equipment from Ambulatory Care Center, that includes Laboratory and X-Ray equipment, Audio booth, Holter Monitor and large trash compactor. Used 1½ years. If interested call 417/869-7006. Ask for Sybil.

Office Space For Sale

For Sale — 2112 Sq. ft. dental office building on 33,000 plus sq. ft. land area. 5 operatories; plumbed for 6th. Dark room, x-ray room, lab, large private office, spacious waiting room. Prime location. Paved off-street parking lot. Ideal for group practice. Roy Willey, Inc., REALTOR, Columbia, MO 314/443-3175.

Books for Sale

HISTORIANS . . .
FORMER MEMBERS.

Available now — *History of the Cole County Medical Society (1819-present).* Outlines origins of the Medical Society plus biographies of present and former members. Beautifully hardbound limited edition. Fine model for societies seeking to write their own histories. $35 + $2.18 tax. Send your order to: Summers Publishing Co., 515 E. High, Jefferson City, MO 65101.

OMH Medical Center

seeks candidates for physician-director of geriatric psychiatry program. Candidate must be board certified or board eligible in psychiatry. Salary comparable to upper range of national average for psychiatry. If you have interest in locating in Oklahoma's Green Country, 40 minutes from Tulsa, and becoming associated with goal oriented health care providing, send Vita or personal profile to: P.O. Box 1038, Okmulgee, Oklahoma 74447 or contact Jerry Johnson, 1-918-756-4233.

1401 Morris Drive
Okmulgee, Oklahoma 74447

MSMA

131st
Annual Convention

**Make plans
now
to attend!**

April 13-16, 1989
Marriott's Pavilion
St. Louis

1,170 Physicians Thank You

Your financial support of the Missouri State Medical Foundation has provided more than $2,400,000 in 2,670 loans to deserving medical students. Physicians throughout the nation thank you for your assistance.

Missouri State Medical Foundation • P.O. Box 1028 • Jefferson City, MO 65102

MISSOURI MEDICINE

Classified Advertising Form

1. Please print or type all information requested and return this form to Valerie A. Peters, Editorial Assistant, MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. **Deadlines for publication are the first of the month preceding the month of publication.** The deadline is the same for cancellation of a current ad. For example: An ad to run in the November issue should be received by MISSOURI MEDICINE no later than October 1. An ad running in the October issue that the advertiser wants to cancel for November should also be cancelled no later than October 1. **Classified advertising costs:** $25.00 for non-members for the first 50 words or less, then 25¢ per word after that. The cost is $15.00 for members for the same ad, plus 25¢ per word beyond 50 words. File numbers cost an extra $1.25.

NAME ______________________________

ADDRESS ______________________________

CITY ______________ **STATE** ______________ **ZIP CODE** __________

SIGNATURE ______________________ **TELEPHONE** ______________

2. Check here if you want your ad to run continuously until you cancel. If you want to specify only certain months, skip this and go to number 3. ☐

3. Check here to specify the months your ad should run. Place the last two digits of the year in the blanks. Check to be sure you mail the ad prior to the deadline.

☐ Jan. 19 ____
☐ Feb. 19 ____
☐ Mar. 19 ____
☐ April 19 ____
☐ May 19 ____
☐ June 19 ____
☐ July 19 ____
☐ Aug. 19 ____
☐ Sept. 19 ____
☐ Oct. 19 ____
☐ Nov. 19 ____
☐ Dec. 19 ____

4. Check here if you want ad response sent to you via a File number. This costs an additional $1.25. ☐

5. Check the heading you want your ad placed under.

☐ Art For Sale
☐ Equipment For Sale
☐ Real Estate
☐ Physician Wanted
☐ Locum Tenens
☐ Other ______________________________
☐ Practice For Sale
☐ Misc. For Sale
☐ Position Wanted
☐ Services

6. Check method of payment:

☐ Check made payable to MSMA. Amount $ ______________ ☐ Please bill me.

7. Use the lines below to print or type the ad *exactly* as it should appear. If necessary, additional paper may be used to complete the ad.

____

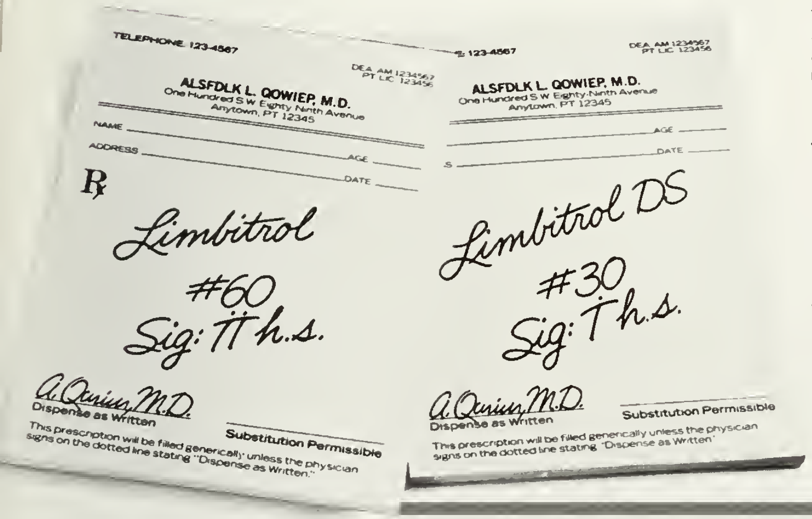
____

____

____

In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



TELEPHONE 123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty Ninth Avenue
Anytown, PT 12345

NAME
ADDRESS
AGE
DATE

℞

Limbitrol
#60
Sig: īī h.s.

A. Quiny M.D.
Dispense as Written

Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written."

123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345

AGE
DATE

Limbitrol DS
#30
Sig: ī h.s.

A. Quiny M.D.
Dispense as Written

Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written."

Protect Your Prescribing Decision: Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ IV

References: **1.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

Limbitrol® Ⓒ IV
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE

ROCHE PRODUCTS INC.
Manati, Puerto Rico 00701

P.I. 0288

In the depressed and anxious patient

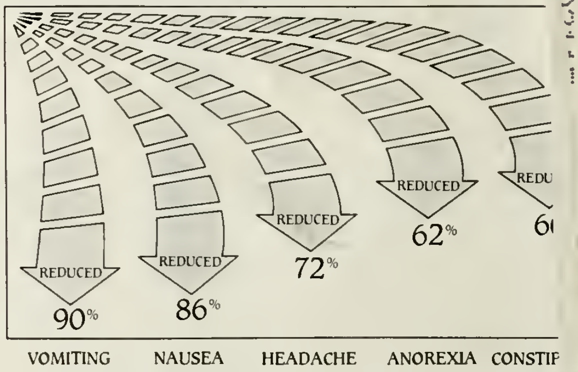
See Improvement In The First Week[1]...

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Sym
During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic sym

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Copyright © 1988 by Roche Products Inc. All rights reserved.
Please see summary of product information inside back cover.

EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MEI
10 SHATTUCK ST.
MA

Missouri Medicine

Journal of the Missouri State Medical Association

February 1989

[redacted]

CHECK OUT MOMEDICO!
X
X
X
X
11
12
13
14
15
17
18
19
20
21
22
23
24
25
26
27
28
29
APRIL
1989

APRIL 13–16 . . .

Mark Your Appointment Book, Doctor

Plan now on attending the Missouri State Medical Association's 131st Annual Convention in St. Louis this year. Stopping at the MOMEDICO booth (#6) could really pay off for you later on.

We have a free gift for you, and when you complete the registration card at our booth, you become eligible for our drawing of a unique prize. We also have waiting for you MOMEDICO literature, of vital importance to your practice. It illustrates how MOMEDICO has become the *premier* doctor-owned captive medical professional liability insurance company in Missouri. Further, it points out the many *exclusive advantages* of receiving your professional liability coverage from MOMEDICO.

We'll be looking for you at the show. Stop by and pick up your free gift. Here's hoping *you* win the MOMEDICO Grand Prize, too.

MOMEDICO

Better Protection. Together.

10795 Watson Road,
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

FEB 21 1989

Contents

Cover

"Laclede's Landing," 18" x 24" oil on canvas by Pete Peterson of Columbia, MO.

Editorials

79 **Making Medical Reading Count**
James J. Benjamin, M.D., *Millersville, Maryland*

81 **Tobacco or Health**
Ramona Chapman, M.D., Associate Editor, *Joplin, Missouri*

Feature article

83 **Exploring the Underground**
Valerie A. Peters, editorial assistant

Scientific Articles

89 **Carcinoma of the Pancreas**
Delia M. Garcia, M.D. and George Tucker, M.D.
St. Louis, Missouri

92 **Erythrocyte Pyruvate Kinase Deficiency**
Timothy A. O'Connor, Carlos M. Monzon, M.D. and Frank I. Clark, M.D.
Columbia, Missouri

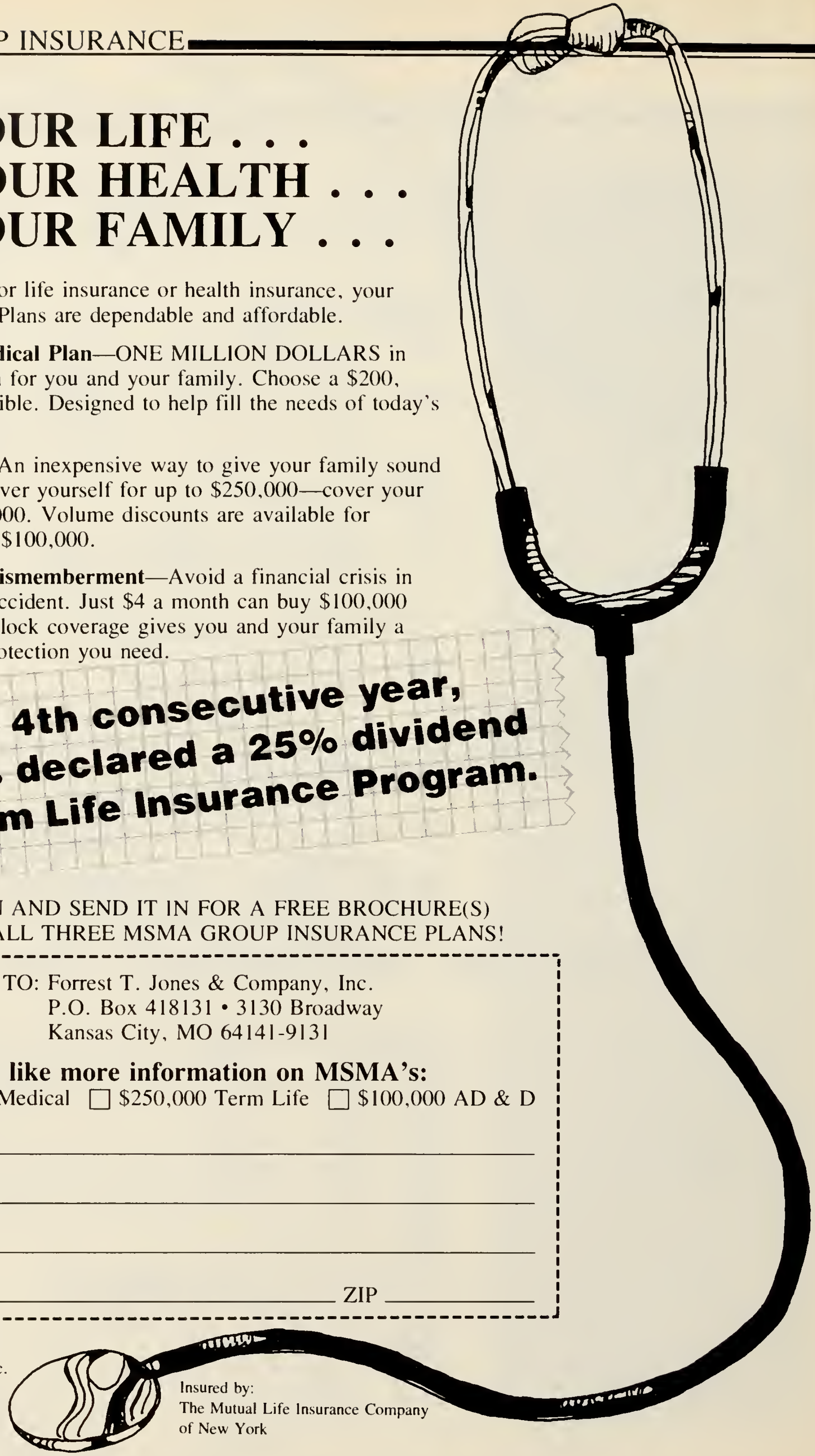
95 **Survey of Cancer Control Attitudes Among Missouri State Legislators**
James R. Davis, M.S., Thomas G. Kern, M.S., Michael C. Perry, M.D. and Ross C. Brownson, Ph.D.
Columbia, Missouri
Robert G. Harmon, M.D., M.P.H.
Jefferson City, Missouri

Departments

67 Progress Notes
71 Letters to the Editor
73 Editor's Desk
75 Auxiliary Message
77 Practice Management
101 New Members
103 Medical School News
111 Continuing Medical Education
115 Information for Contributors
115 Index to Advertisers
116 Classified Advertising Form
117 Classifieds

MSMA PHONE BOOK

Missouri State Medical Association
314/636-5151
American Medical Association
312/645-5000
MSMA Physicians' Health Program
314/768-4990
MOMEDICO
1-800-392-8039
Dodson Insurance Group
1-800-825-3760
MSMA Retirement Plan/ E. F. Hutton
(Call collect) 314/725-9690
Forrest T. Jones
1-800-892-7272
Fred S. James
KC 1-800-892-7105
St. Louis 1-800-445-9513
Health Care Financing Administration
816/426-5233
Intrav
314/727-0500
Medicaid Provider Relations
1-800-392-0938
Medicare Provider Relations
1-800-392-3070
Medicare Part B Blue Cross Blue Shield
Kansas City
1-800-654-9629
Missouri Department of Health
314/751-6400
Missouri Department of Social Services
314/751-2086
Missouri Patient Care Review Foundation
(Preadmission) 1-800-392-8060
(General Info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs
314/751-8042
Missouri State Board of Registration of the Healing Arts
314/751-2334



MSMA GROUP INSURANCE

FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $200, $500, or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S)
ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:
☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ____________________

ADDRESS ____________________

CITY ____________________

STATE ____________________ ZIP __________

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

Insured by:
The Mutual Life Insurance Company
of New York

Missouri Medicine

Vol. 86, No. 2 *Journal of the Missouri State Medical Association* February 1989

Editor
Donald G. Sessions, M.D.
Associate Editor
Ramona M. Chapman, M.D.
Editor Emeritus
Jordan W. Burkey, M.D.
Managing Editor
Susan Flanigan Gold
Business Manager
Royal O. Cooper
Editorial Assistant
Valerie A. Peters

EDITORIAL BOARD

Anesthesiology
Mark G. Zukaitis, M.D.
Cardiovascular Surgery
Jack J. Curtis, M.D.
Dermatology
Philip C. Anderson, M.D.
John DeSpain, M.D.
Ernest Lorenc, M.D.
Emergency Medicine
David M. Trantham, M.D.
Family Practice
William D. Bradshaw, M.D.
Carl R. Kruse, M.D.
Kirby L. Turner, M.D.
Gastroenterology
Jay P. Marshall, II, M.D.
Hematology
William H. Crosby, M.D.
Internal Medicine
John S. Daniels, M.D.
Stephen Hamburger, M.D.
Robert K. Skillman, M.D.
Neonatology
Elizabeth J. James, M.D.
Neurosurgery
Keith Rich, M.D.
Obstetrics and Gynecology
James Daly, M.D.
Oncology
Michael C. Perry, M.D.
Ophthalmology
John C. Hagan, III, M.D.
F. Thomas Ott, M.D.
Orthopedics
William P. Thorpe, M.D.
Otorhinolaryngology
J. Regan Thomas, M.D.
Pathology
Scott A. Martin, M.D.
Pediatrics
R. Don Blim, M.D.
Physical & Rehabilitation Medicine
Paul E. Kaplan, M.D.
Plastic Surgery
LeRoy Young, M.D.
Psychiatry
William F. Clary, M.D.
J. C. Corvalan, M.D.
Radiation Therapy
MacDonald B. Logie, M.D.
Radiology
Donald R. Germann, M.D.
General Surgery
Mark S. Cotner, M.D.
Richard O. Craig, M.D.
Donald Silver, M.D.
Vascular Surgery
W. Kirt Nichols, M.D.
Urology
George M. Austin, M.D.

PUBLICATIONS COMMITTEE

Chairman
Donald G. Sessions, M.D.
Vice-Chairman
Ramona M. Chapman, M.D.
Members
Jack J. Curtis, M.D.
John S. Daniels, M.D.
Stephen Hamburger, M.D.

MSMA Officers

President	T. J. Cooper, M.D., *St. Louis*
President-Elect	Marvin A. Singleton, M.D., *Joplin*
Secretary	Norman P. Knowlton, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Kenneth R. Smith, Jr., M.D., *St. Louis*
Vice President	William R. Richardson, M.D., *Union*
Vice President	Herman J. Hausheer, M.D., *Independence*
Speaker	Arlen D. Winsky, M.D., *Springfield*
Vice-Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*

Councilors

Gary A. Dyer, M.D., *St. Joseph,* Chairman
Dorothy D. Reister, M.D., *Kansas City,* Vice Chairman
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *St. Louis*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
Carol F. Williams, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Louis*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A. J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Raymond J. Caffrey, M.D., *Independence*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Evan Saunders, medical student, *St. Louis*
Charles Barbee, M.D., *Columbia*
Victoria Martin, M.D., *Shawnee Mission, KS*

Vice Councilors

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Carl R. Kruse, M.D., *Palmyra*
Meredith Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Mark W. Martin, M.D., *Lee's Summit*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Carole Matteri, medical student, *St. Louis*
William Dorzab, M.D., *Kansas City*
Charlene Prather, M.D., *Kansas City*

AMA Delegates

Robert McDonald, M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*
George M. Bohigian, M.D., *St. Louis*
Melvin C. Kasten, M.D., *Cape Girardeau*
Larry G. Piepergerdes, M.D., *Kansas City*
Vernon H. Balster, M.D., *St. Louis*
Walter A. German, M.D., *Springfield*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251

Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.

Subscription rates: $20 per year.

Second class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Department, P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.

Copyright © 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

MEDICAL PROFESSIONAL LIABILITY INSURANCE

Playing Leapfrog?

It's a kid's game. Great! Except that you're not a kid anymore. You're a health-care professional who doesn't have time for games, ESPECIALLY when it comes to your **medical liability insurance.**

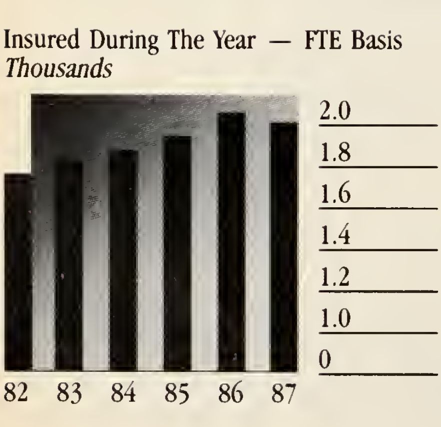
Remember your last insurance company? When it came time for renewal, they played "hide 'n' seek" and disappeared. Completely. And remember that other insurance company that enticed you with super-low premiums, and then gave you renewal rates that made you "jump over the moon?"

Stop playing someone else's game, and talk with us at Medical Defense Associates. **MDA is a not-for-profit medical liability insurance company** that was formed by doctors to serve only doctors.

For over 12 years now, MDA has been offering consistently competitive rates and superior career protection. We have a reputation for protecting YOUR reputation with aggressive defense of unmerited claims. As a result, **MDA insures more of Missouri's doctors than any other medical liability insurance company.**

Settle on the winner. We don't play games.

Insured During The Year — FTE Basis
Thousands



Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MSMA Progress Notes

MSMA & AMA fight Premier

In December, representatives from MSMA and AMA testified before the Missouri Department of Health (DOH) that the new "smokeless cigarette" from R.J. Reynolds should not be allowed on the market. The new cigarette known as Premier is being test marketed in Missouri and Arizona. Both MSMA and AMA believe R.J. Reynolds should comply with safety testing and labeling requirements for new drugs since the product is a "nicotine delivery system."

Those testifying at the St. Louis hearing included MSMA President T.J. Cooper, M.D.; St. Louis Metropolitan Medical Association (SLMMS) President Jack Kayes, M.D.; SLMMS Vice President Fritz Byrum, M.D.; AMA Council on Legislation member Kenneth M. Viste, M.D. and Patrick Reynolds, a grandson of the late R.J. Reynolds who founded the tobacco company.

According to Dr. Viste the "AMA is simply unwilling to accept on faith a new product of an industry that still denies that smoking is unhealthy." He stated that approximately 50 million people are now addicted to nicotine. "Most of them have tried or would like to quit," testified Dr. Viste. "...We now have an historic opportunity to prevent a new system of nicotine delivery from taking hold without first determining whether it is safe for consumption."

Five witness appeared on behalf of the tobacco company. At the conclusion of the hearing the State Board of Health adopted a resolution classifying Premier as a "nicotine delivery device." The Board also resolved to join the AMA in its petition before the FDA to regulate Premier at the federal level.

In addition, Missouri retailers are being urged to return their stock of Premier to suppliers until the FDA makes a final determination. ■

Update: obstetric medical liability insurance

The Missouri Department of Health (DOH) reminds physicians that the State Legal Expense Fund is still available to provide medical liability coverage for physicians who provide obstetric or pediatric care for minimal or no compensation under contract with a local health department.

In addition, there has been a perception for some time that low income pregnant women are more likely than other women to sue physicians for malpractice. There is significant evidence to the contrary. Please refer to "Prenatal Care--Reaching Mothers, Reaching Infants" published in 1988 by the Institute of Medicine of the National Academy of Sciences, Sarah S. Brown, editor. The DOH encourages physicians to read this information and to continue providing obstetric care to low income women in Missouri.

Also, the DOH recently redefined minimal compensation as up to Medicaid fee-for-service or $40 per hour. Additional information on this can be obtained from DOH General Counsel Robert Northcutt at 314/751-6005. ■

MSMA sponsors workshops

Once again, MSMA is sponsoring several workshops presented by Conomikes Associates, Inc.

These workshops include:

Medicare Update--This half-day seminar will be held March 28 at the Airport Marriott in St. Louis, March 29 at the Holiday Inn University Plaza in Springfield, March 30 at the Holiday Inn Executive Center in Columbia and March 31 at the Marriott Plaza Hotel in Kansas City.

How to Get Started in Medical Practice--The two-day seminar will be held March 28-29 at the Henry VIII Hotel in St. Louis.

Third Party Reimbursement & Coding--May 17 & 18 at locations to be announced. This is a one-day seminar.

For additional information on these seminars, contact the MSMA office at 314/636-5151.

In addition, Conomikes Associates, Inc. are providing a new consultation service, Reimbursement and Coding. They will go directly into the physician's office and help improve coding, superbills, follow-up with carriers, plus on-the-job training for office employees. For more information, call the Conomikes office in Los Angeles, CA at 1-800/421-6512. ■

Medically unnecessary program update

HCFA and the AMA have agreed upon changes HCFA will make in the medically unnecesary program as a result of AMA's threatened litigation. It is a significant improvement in the process.

Under the agreement: 1. Claims development, which HCFA had intended to abandon, is now to continue indefinitely and HCFA has conceded its "importance to a fair process;"

2. A directive to carriers will immediately be sent out requiring that claims development be done "fully and fairly" and detailing the necessary steps, including a statement "of the basis of, and criteria for" any denial letter;

3. A required process for medical society notice and consultation on carrier review issues is for the first time established;

4. The formal release of all screens (parameters) is not required at this time but input from medical societies regarding new screens is required and consultation regarding any carrier policy, including existing screens, is mandated.

There will, of course, still be problems, but this is a much better arrangement. AMA will assist any state medical society in the process of responding to, and consulting with, any carrier regarding medical review policy. AMA remains free to pursue all judicial or legislative remedies with regard to the medically unnecessary program. ■

Clinical Labs Act signed into law

Now that the 100th Congress is a part of the past, the AMA can celebrate significant victories on a number of key issues that were before Congress during the final days of the Reagan administration.

Foremost among these victories was passage of H.R. 5471. This bill assures provision of quality lab services without imposing burdensome requirements on physicians and patients by fully recognizing and encouraging private accreditation activities to establish appropriate standards, mandating different personnel standards based on laboratory practice setting and test categories, granting certifications for laboratories that have fulfilled private accreditation standards and waiving certification for labs involved in simple tests, providing laboratories with an expeditious method of updating their original certification applications in order to recognize new as well as changing and expanding technologies, establishing feasible and reasonable standards that are commensurate with the service involved, and allowing for an apropriate phase-in of these standards.

Deleted from the bill were required direct billing, prohibition on self-referral and mandated inspection prior to certification provisions. Also defeated was a provision that would have amounted to a potential denial of due process for labs failing proficiency tests. ■

MSMA Headquarters shaping up

The renovation of MSMA Headquarters at 113 and 115 Madison in Jefferson City continues to progress at a fast clip. Once the interior of 115 Madison was cleared, the work on the floors and walls began. For those of you who have never seen cement poured, it was an interesting task to see performed, as you can see in the photos. The cement was run through a long hose and carefully poured onto the floors. What is interesting is that the cement dries very quickly and once it is dry, you have a floor with no dips or uneven places. The photos show what the floor looked like before the concrete was poured and what it looked like as the concrete was being poured.

Now that the floors are cemented, work has begun on the woodwork and trim. There is certainly no doubt that work is being done — the noise of the saws, drills and hammers has everybody shutting their doors and wearing ear plugs!

But we know everyone is as anxious as we are to see the end result of the "makeover." ■

Infectious Waste regulations

The handling, transportation and disposal of infectious waste in the State of Missouri is regulated by the Department of Health (DOH) in conjunction with the Department of Natural Resources.

Such regulation directly affects physicians of this state and should be of the utmost concern to them. The following discussion of infectious waste regulation will focus on application of the regulation to the Missouri physician and the physician's compliance requirements.

According to MSMA legal counsel, infectious waste is capable of producing an infectious disease. For a waste to be infectious, it must contain pathogens with sufficient virulence and quantity so that exposure to the waste by a susceptible host could result in an infectious disease. In addition, infectious waste is produced by a "generator" which is any single office or facility whose act or process first causes an infectious waste. Such an office facility includes a doctor's office, dentist office, hospital, nursing home, mortuary, etc.

For regulation purposes, generators are separated into two classifications: regular generators and "small

Above: A worker on 115 Madison gets the privilege of pouring the cement in the center room on the second floor of the building. Looks like fun, maybe?

Above: This is what the same floor in the photo above looked like before the cement was poured. Step by step the building at 115 Madison is taking shape.

quantity generators." A small quantity generator is an office, facility or person who generates one hundred kilograms or less per month of infectious waste. Most likely, physician offices and clinics will classify as small quantity generators. However, that determination must be made by each individual office and clinic.

Pursuant to the (DOH) Rules, small quantity generators must include the following categories of waste which must be disposed of in accordance with the statutes and rules regardless of quantity:

(A) Sharps — all discarded hypodermic needles, syringes, pasteur pipettes, broken glass and scalpel blades;

(B) Cultures and stocks of infectious organisms as well as culture dishes and devices used to transfer, innoculate and mix cultures; and

(C) Other wastes — those designated by the medical authority responsible for the case of the patient which may be capable of producing an infectious disease.

Before infectious waste can be placed into a solid waste disposal area, it must be rendered innocuous by autoclaving, incineration, chemical sterilization or other other methods approved by the DOH. A small generator may treat infectious waste on-site using a permitted method. All other types of generators must have their infectious waste treated at a permitted infectious waste processing facility.

Prior to transport to a permitted waste processing facility, all waste must be placed in rigid or semi-rigid, leak-proof containers with the universal biohazard symbol prominently displayed, labeled "Infectious Waste" and sealed.

Infectious waste may be disposed of as a solid waste in a sanitary landfill if the treater certifies to the transporter and to the sanitary landfill operator that the waste has been rendered innocuous. Certification must contain the name, mailing address, location and phone number of the facility treating the waste; the printed name and signature of the person responsible for treatment; a brief description of the waste; and a brief description of the method of treatment.

Persons violating the provisions of the Infectious Waste Act may be subject to criminal liability. Physicians who violate the provisions may be subject to discipline from the State Board of Healing Arts. ■

THE LOWER RESPIRATORY TRACT—
More vulnerable to infection in smokers and older adults

THE
LITTLE GARAGE
Ra

Experience counts

Ceclor® Pulvules® 250 mg
cefaclor

think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae, Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS

Administer cautiously to allergic patients

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include.
- Gastrointestinal (mostly diarrhea): 2 5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1 5%, usually subside within a few days after cessation of therapy Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported Antihistamines and corticosteroids appear to enhance resolution of the syndrome
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061088L]

Additional information available from
Eli Lilly and Company, Indianapolis, Indiana 46285
PV 2351 AMP

Lilly
Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

© 1988, ELI LILLY AND COMPANY

CR-5012-B-849345

Letters to the Editor

Glaxo presents its views...

Dear Dr. Sessions:

We read with interest the review by Douglas et al[1] concerning H_2-receptor antagonist usage in Missouri Medicaid recipients. We, too, share the authors' concerns regarding appropriate utilization of these agents and commend their efforts to foster rational drug prescribing. However, in contrast to the authors' conclusions, there is a large body of scientific evidence that supports a favorable benefit-to-risk ratio during treatment with H_2-antagonists.

Although the authors state that the efficacy of medical treatment of peptic ulcer disease has not been demonstrated, results from numerous placebo-controlled studies provide convincing evidence that H_2-antagonists not only accelerate healing of both duodenal and gastric ulcers but effectively relieve pain during the course of treatment.[2-6] Healing rates for duodenal ulcers have ranged from 60% to 96% over a four- to eight-week course of therapy with the H_2-antagonists, compared with rates of 35% to 45% during recent placebo treatment.[4-6] Recent studies have also shown that a significant reduction in pain occurs on day one of therapy and continues throughout the course of treatment.[7] It is well recognized that duodenal ulcer disease is a chronic relapsing condition with recurrence rates of 50% to 90% within the first year after ulcer healing. Maintenance therapy with H_2-antagonists reduces this relapse rate to 20% to 50%.[4,8]

While we agree that H_2-antagonists are not indicated for the treatment of nonulcer dyspepsia, it is important to note that H_2-antagonists are commonly prescribed and are effective for the relief of symptoms associated with gastroesophageal reflux, a condition which occurs in up to 36% of individuals.[9,10]

Concerning the elderly, epidemiological data indicate that the incidence of gastric ulcer rises significantly after age 40, and that the incidence of duodenal ulcer increases linearly with age. The increasing incidence of peptic ulcer disease with age, coupled with the absolute increase in the elderly population, suggests that peptic ulcer disease is quite prevalent in the geriatric population.[11] Data from controlled studies have shown that H_2-antagonist therapy is effective and well tolerated in this patient group.[12]

With respect to safety, the authors generalize that drug interactions occur with H_2-antagonists. While it has been well established that cimetidine inhibits hepatic cytochrome P-450 mediated drug metabolism, the other currently available H_2-antagonists do not significantly affect cytochrome P-450 mediated drug metabolism.[13]

It was previously hypothesized that long-term acid suppressive therapy and anacidity may predispose patients to tumors of the stomach. There are no clinical data to suggest that this is the case for the currently available H_2-antagonists.[14]

Sustained anacidity does not occur following therapy with any of the currently recommended H_2-receptor antagonist dosage regimens. Furthermore, nighttime dosing of these drugs, either for acute healing or long-term maintenance therapy, while reducing acid secretion during the overnight period, allows acid secretory patterns to return to a more physiological state during the day.[15]

The authors state that H_2-antagonists may contribute to bezoar formation. In fact, bezoar formation occurs rarely, is most common in patients who have undergone partial gastrectomy (especially if vagotomy was also performed) and is relatively uncommon in those with an intact stomach. We are unaware of any data linking H_2-antagonists with a greater incidence of bezoar formation than that encountered for other anti-ulcer drugs. Bezoars have also been noted in patients treated with acid neutralizing drugs (e.g. antacids),[16] and cytoprotective agents (e.g., sucralfate).[17]

Finally, the authors suggest that H_2-antagonists promote gastric bacterial overgrowth and this may pose a special problem (i.e., nosocomial pneumonia) in intubated patients receiving antacids.[18] A full review of this paper does not support that conclusion.

In summary, we support programs aimed at appropriate utilization of the H_2-antagonists, agents that have clearly defined safety and efficacy profiles and are the mainstay of therapy for patients with peptic ulcer disease.

Jay H. Bauman, Pharm.D.
Jerry W. Snidow, Pharm.D.
Drug Information
Medical Services
Glaxo, Inc.
Research Triangle Park, NC

References

1. *Douglas KC, et al: H_2-receptor antagonist usage in Missouri Medicaid recipients. Missouri Medicine 1988;12:799-800.*

2. *Lewis JH: Treatment of gastric ulcer: What is old and what is new. Arch Intern Med 1983;143:264-274.*

3. *Hirschowitz BI, et al: Treatment of benign chronic gastric ulcer with ranitidine: A randomized, double-blind, and placebo-controlled six week trial. J Clin Gastroenterol 1986;8:371-376.*

4. *Thomas JM, Misiewicz G: Histamine H_2-receptor antagonists in the short- and long-term treatment of duodenal ulcer. Clin Gastroenterol 1984;13:501-541.*

5. *Howden CW, et al: Nocturnal doses of H_2-receptor an-*

tagonists for duodenal ulcer. Lancet 1985;1:647-648.
6. Berardi RR, et al: Comparison of famotidine with cimetidine and ranitidine. Clin Pharm 1988;7:271-248.
7. McCullough AJ: A multicenter, randomized, double-blind study comparing famotidine with ranitidine in the treatment of active duodenal ulcer disease. Am J Med 1986;81(Suppl 4B):17-24.
8. Strum WB: Prevention of duodenal ulcer recurrence. Ann Intern Med 1986;105:757-761.
9.Richter JE: A critical review of current medical therapy for gastroesophaeal reflux disease. J Clin Gastroenterol 1986;8(Suppl 1):72-80.
10.Sontag S, et al: Ranitidine therapy for gastroesophageal reflux disease: Results of a large double-blind trial. Arch Intern Med 1987;147:1485-1491.
11.Kurata JH, Haile BM: Epidemiology of peptic ulcer disease. Clin Gastroenterol 1984;13:289-307.
12.Sirgo M, et al: Ranitidine for duodenal ulcer disease in the elderly: A retrospective review of five multicenter trials. J Clin Pharmacol 1988;28:921.
13.Powell JR, et al: Histamine H_2*-antagonist drug interactions in perspective: Mechanistic concepts and clinical implications. Am J Med 1984;77(Suppl 5B):57-84.*
14.Wormsley KG: Assessing the safety of drugs for the long-term treatment of peptic ulcers. Gut 1984;25:1416-1423.
15.Gledhill T, et al: Single nocturnal dose of an H_2*-receptor antagonist for the treatment of duodenal ulcer. Gut 1983;24:904-908.*
16.Burruss GL, et al: Small bowel obstruction from an antacid bezoar. A ranitidine-antacid interaction. S Med J 1986;79:917-918.
17.Algozzine GJ, et al: Sucralfate bezoar. N Engl J Med 1983;309:1387.
18.Driks MR, et al: Nosocomial pneumonia in intubated patients given sucralfate as compared with antacids or histamine type 2 blockers: The role of gastric colonization. N Engl J Med 1987;317:1376-1382.

... and the DUR responds

Dear Dr. Sessions:

We appreciate the opportunity to respond to the letter of Drs. Bauman and Snidow, representatives of Glaxo, Inc. The Drug Utilization Review Committee of the Missouri Division of Medical Services has a charge that actually is quite simple. We are to monitor overall drug use in the Missouri Medicaid program and to aid medical practitioners in their efforts to appropriately use drugs under the Missouri Medicaid program.

We have identified a major problem in Missouri with the utilization of the H_2-receptor antagonists. In long-term care facilities particularly, these drugs are used widespread in long-term full dose regimens for undocumented, inappropriate and poorly supported diagnoses. Current Missouri Medicaid program drug costs for the three H_2-receptor antagonists on the formulary exceed $500,000.00 per month. These three drugs alone are consuming more than 10% of the total Missouri Medicaid drug budget which contributes to the current moratorium on adding any new pharmaceuticals to the Missouri Medicaid formulary.

While we agree that peptic ulcer disease "is quite prevalent in the geriatric population," the incidence of true peptic ulcer disease is not more than twice that of the general population. In spite of that, the elderly in Missouri's long-term care facilities are consuming 50% of the more than $500,000.00 spent on these drugs while being only 10% of the total Medicaid recipients.

A recent position paper titled "Improving Medical Education in Therapeutics" authored by the Health and Public Policy Committee of the American College of Physicians made several observations pertinent to our comittee's goals.[1] Among their observations were that: 1.Continuing medical education in pharmacology can be characterized as largely random, incomplete, and subject to distortion; 2. The actual prescribing practices of physicians appear to be heavily influenced by views of the pharmaceutical industry; 3. Physicians should be provided with up-to-date and clinically relevant information in therapeutics.

To help meet the goal of improved education in therapeutics we published the first DUReport in September 1988 and suggested guidelines for appropriate use of H_2-receptor antagonists. They include: 1. Limit full dose therapy to 4-8 weeks, and consider single bedtime or late afternoon dosing regimens; 2. Limit outpatient prescriptions to 1-2 refills and nursing home orders to 8 weeks; 3. Adjust dosing downward for patients with impaired renal function (Creatinine clearance <30ml/min/1.73 m2); 4. Use only bedtime or late afternoon dosing for prophylactic regimens, and avoid concurrent use of different H_2 antagonists.

We look forward to the continuing support of the pharmaceutical industry representatives in their efforts to promote safe, rational and economic prescribing of these drugs per our guidelines and their FDA-approved package labeling.

Sincerely,

David R. Rush, Pharm.D.
Chairman, Missouri
Division of Medical
Services Drug
Utilization Review
Committee

These views are those of the committee and not necessarily those held by the Department of Social Services.

References

1. Health and Public Policy Committee, American College of Physicians: Improving medical education in therapeutics. Ann Intern Med 1988; 108: 145-147.

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

Editor's note: I recently received this letter and believe it to be an articulate expression of the issues faced by patients in our medical system. Most patients just grit their teeth while facing their fear and lonliness. Diane, as can be seen, has invented an entire system to support her. Many patients have neither the imagination nor the energy to do this.

Diane is no kook. She is a creative occupational therapist who has always worked within the medical system. About a year ago she found out that she had inflammatory carcinoma of the breast. This letter is one of serveral she has written to those of us who love and support her.

She is fully aware of the prognosis of her condition.

Thanks

Hey Mates,

It's "Thanks" giving time, a time for me to reflect on all of you supporting me. You are a dynamo team! It looks like we've created the miracle of putting my cancer into remission. I had several studies done (bone marrow biopsies and aspirations, bone scan, cat scans and multiple fine needle aspirations of my right breast) upon my return from Japan...no evidence of cancer in those samples! Three cheers!

Lots of changes in the last two months...I've got not only one new doctor but two. After months of search and what seemed like endless phone interview and dead-end leads, I found an absolute dream of a doctor. She's my main lady. Not only is she bright; she's creative and compassionate. She takes time to explain the options and their ramifications, and then, **I get to choose** what's going to happen. She's my partner, not a dictator. She's so refreshingly genuine and sincere.

Up until yesterday, it was our plan to accomplish three more cycles of chemotherapy. A "cycle" consists of a week in the hospital followed by about a week in bed at home and then several weeks of letting my body recover and get strong enough to do another cycle. We're using some new drugs designed to kill off the cancer that didn't get devastated with the drugs we were using for the first eight months.

It now looks as if my body has had all the chemo it can stand. It's been eight weeks since my last chemo and my blood counts still have not returned to normal levels. This seems to indicate that my bone marrow is worn out. Let's give a standing ovation to my marrow for doing the extraordinary job that it has for the last ten months of chemo. It has served me well.

Having reviewed all this yesterday, we've decided to move to the next stage of treatment--hormonal therapy. For me, that means taking estrogen-based medicine every day at home in pill form and hopefully having minimal side effects.

My second oncologist is just as wonderful and is equally committed to taking care of me as if I were his own loved one. He's rather new to the area, having come here to spearhead the development of a revolutionary protocol for doing bone marrow transplants for women who have metastic breast cancer. Now, I'm not going to have a bone marrow transplant...for now we just want to take some of my bone marrow and store it so it will be available when **(and if)** my cancer shows itself again. So the procedure that we we want to do now is called bone marrow harvest.

Let me explain how it works: the bone marrow harvest is a surgery in which the surgeon will insert a needle several times into the bones at the top of my pelvis, just below my waist, at the back. As he does that, he'll suck out the bone marrow. The bone marrow will then be frozen, in the event I need it in the future. Well, that's an abbreviated version of what I understand, but then I thought you'd appreciate being spared the gruesome details. Quite frankly, I think I'd just as soon be spared the gory details, too.

I'm so pleased to have found my tow new doctors that I'm amazed that I put up with the previous situation for as long as I did. The contrast allows me to see that my first doctor was treating the cancer; my new doctors are taking care of me while we figure out how to deal with the cancer; my new doctors have a relationship with me. It's nice to work with people who relate to me as a human being rather than a piece of diseased protoplasm. Although it was a series of repeated upsets that caused me to begin my search for anew doctor, it looks now as if the universe had to create an intolerable circumstance before I could "get" that it was time for a change. Thank you, universe.

In addition to acupuncture treatments three times a week, I'm working with a physical therapist and a rheumatologist with my right shoulder as it is beginning to freeze-up due to the long-term side effects of the radiation therapy I had last summer.

I also continue to enjoy the emotional support of my counselor without whose

continued on page 74

Editor's Desk
continued from page 73

trained positiveness, I'd be spending more time on the "down side" of this adventure. She is a playful, nurturing Mother Earth figure, committed to having me learn to "play"...and for those of you who have seen how stuck I can get in my negativity you can imagine how creative she is.

So, all in all, my days remain filled with the business of getting and being well, a full-time job! The pay seems lousy until I realize that the payoff isn't in "dollars" — it's in "sense". To paraphrase my recent conversation with my friend Nora: How lucky I am to have the opportunity in the middle of my life to have a chance for a new beginning; stripped of the habit of thinking that I know how to do it; to start fresh, conscious of the `gift of choice'. It is truly an opportunity for enlightened and inspired action." Jeeze, Louise, I'm scared.

On the brighter side — the lively side — I've been invited to spend the evening with actress Lily Tomlin and writer Jane Wagner. Beginning with prime seats for the final Chicago performance of their fabulous current work: "In Search of Signs of Intelligent Life in the Universe," we'll then proceed to exciting back stage exploration and complete the evening with a full Korean dinner, hosted by Sung Baek, my acupuncturist and confidant. I am thrilled, tickled and honored to have this opportunity to be with these powerful and creative people.

I thank those of you who've said that my epistles have inspired you. Your comments eased me to the realization that they have been an inspiration to me, too. They come from the 'Universal Well of Inspiration, the Fountain of all Creation.'

The only thing that has made my life bearable these last many months has been your support and a trust that this 'chapter on cancer' is an essential part of my life, not an interruption to it. Living these experiences has been no pleasure, yet the lessons I'm learning give reason that is sufficient for the existence of my life. Thank you for sharing my journey and my inspirations. I am honored by your company and your partnership!

When I notice how much you have supported me, I am astonished. I love you dearly and some days desperately. When I appreciate how deeply you matter, I weep.

In thanks, I give my life back to you!

—Diane

Auxiliary Message
continued from page 75

has been provided by a local hospital to assist with immediate suicide intervention. After a crisis, team members will help other members of the student body work through their own emotional turmoil.

The Adolescent Suicide Alert Program was started last year after 18 months of preparation and is currently in all public and private junior and senior high schools in Jefferson City. Orientation sessions are offered to all new teachers prior to school opening in the fall. Community response has been excellent with many organizations and parent groups asking for a program on A.S.A.P.

Practice Management
continued from page 77

icy with General American, and thus the HCPCS Level II codes that your receive from General AMerican will not have a code A4550 for surgical trays. Physicians whose Medicare carrier is Blue Cross/Blue Shield, the code for surgical tray, when appropriately used, is reimbursed separately from the surgical procedure.

Auxiliary Message

by Jean Wankum
MSMAA Vice President

Created in 1988, the goal of the Adolescent Suicide Alert Program is simple: To prevent teen suicide.

A. S. A. P.

An estimated 400,000 adolescents will attempt suicide in the United States this year --- 6,000 will succeed. The suicide rate of young people has tripled since 1960 and is now the second leading cause of death among America's youth.

Adolescents are more likely to become suicidal during the winter and spring seasons. Surprisingly, most attempts are made in the home between the hours of 6 p.m. and midnight, with at least one parent in the home.

Suicidal adolescents typically have poor coping skills, making them more vulnerable during times of stress. As adults and parents we must be sensitive to our teenagers when they experience loss, failure, rejection or discord. Increased stress may arise during exams or when report cards are distributed; when fights or arguments occur with friends; following the break-up of a significant relationship with the opposite sex; and during times of family stress. Since approximately 70% of individuals who commit suicide have visited a physician during the last four months of their life, physicians and nurses need to be vigilant for the signs of depression and suicide. We must not only search out our patients' physical ailments, but also be alert for the following warning signs:

- Statement of wish to die
- Behavior changes
- Changes in eating or sleeping patterns
- Making "final arrangements," giving away possessions, making peace with friends
- Drug/Alcohol abuse
- Accident proneness, risk taking
- A previous suicide attempt

It is also important to realize that some of these warning signs may be considered normal signs of growing up. The time to be concerned is when an individual exhibits several of these clues or signals, or when they are repeated over a period of time.

In response to the alarming increase in suicide among young people, the Cole County Medical Auxiliary and Dr. Virginia Billian, a Jefferson City psychiatrist, with the assistance of local health professionals, are sponsoring a program for the school systems called Adolescent Suicide Alert Program, A.S.A.P. The goal of A.S.A.P. is to prevent teen suicide.

To attain this goal, a series of orientation programs has been formulated. These programs are presented to faculty, school support staff, parents and teens. They are designed to increase awareness of the warning signs of suicide. A film emphasizing the warning signs of suicide is also incorporated into these orientation programs. A question and answer period follows each presentation. After the orientation series is completed, those individuals who wish to actively become involved may join the in-house crisis team.

An in-house crisis team has been established for each junior and senior high school. This team consists of faculty and staff who have attended the orientation program and then attended an additional six hours of crisis training. Each crisis team member serves as a source of assistance for students in crisis, students recognizing a friend in need, teachers recognizing students with warning signs and as a resource person for parents. In the event of a crisis, a suicide hotline

continued on page 74

In 1986, Lady Liberty celebrated her 100th birthday, Senate proceedings began airing live on television and United Missouri Brokerage Services, Inc. opened for business.

United Missouri Brokerage Services opened in '86. It didn't make national headlines. It did make a difference.

Since then, United Missouri's brokerage experts have handled transactions for thousands of investors to buy, sell and trade stocks, bonds and options.

They've used their brokerage expertise to give customers quick and accurate transactions at a substantial savings when compared to full commission brokers' fees.

Today, United Missouri still makes a difference. It can make a difference for you. For more information and an application, stop by any United Missouri Bank. And, pick the proven performer.

UNITED MISSOURI
BROKERAGE SERVICES, INC.
Member NASD and SIPC

A subsidiary of United Missouri Bancshares, Inc.

928 Grand P.O. Box 419226 Kansas City, Missouri 64141-6226
(816) 556-7240

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

*Although your name will **not** be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Dear Dr. Woerth,

I am considering a computer for my medical office. Have you any recommendations?

Dr. J.B.

Dear Dr. J.B.,

There are many things besides hardware and software needs to consider when computerizing your office. First, be sure that you have staff members who are willing and able to learn how to operate a computer. If the staff is opposed to a computer, or overly reluctant to learn how to use one, then it is likely that any computer system that you purchase will not be used to its maximum potential.

If your staff is eager to learn the efficiencies of a computer, there are several computer necessities and functions to consider. I believe it is necessary that the computer system be user-friendly, i.e., easy to use with easy access to assistance and repairs when needed. Any system will have "down time," and there will be questions that need expert opinion. Thus, make sure that the system that you purchase comes with readily accessible help and repair services. If you have to wait several days to get a system repaired and working again, it will result in inefficiency in your office. Likewise, if every computer questions that your staff has requires a long-distance phone call for an answer, the system may be less cost efficient than you anticipated.

The following is a list of functions I believe are important for a medical office. The list is not exhaustive, as needs vary with the type and size of your practice.

Patient demographics files: Name, address, place of employment, birthdate, insurance carrier, head of household, outstanding balance, etc.

Patient treatment files: Procedures completed pertinent to diagnosis, allergy listing, other special medical needs/history.

Patient account file: Procedures completed, fees, amount paid/outstanding, etc.

Patient statement forms, insurance forms.

Transaction file: For posting services and fees.

Daysheet: List of patients seen and services completed, total fees charged, total fees collected, bank deposits, cash on hand, cumulative total for week-to-date, month-to-date, and year-to-date of charges and collections.

Referral acknowledgement/thank you file: To referring patients and to referring physicians.

List of aged accounts.

Income reports.

Letters to patients.

Patient address labels.

Procedural code file.

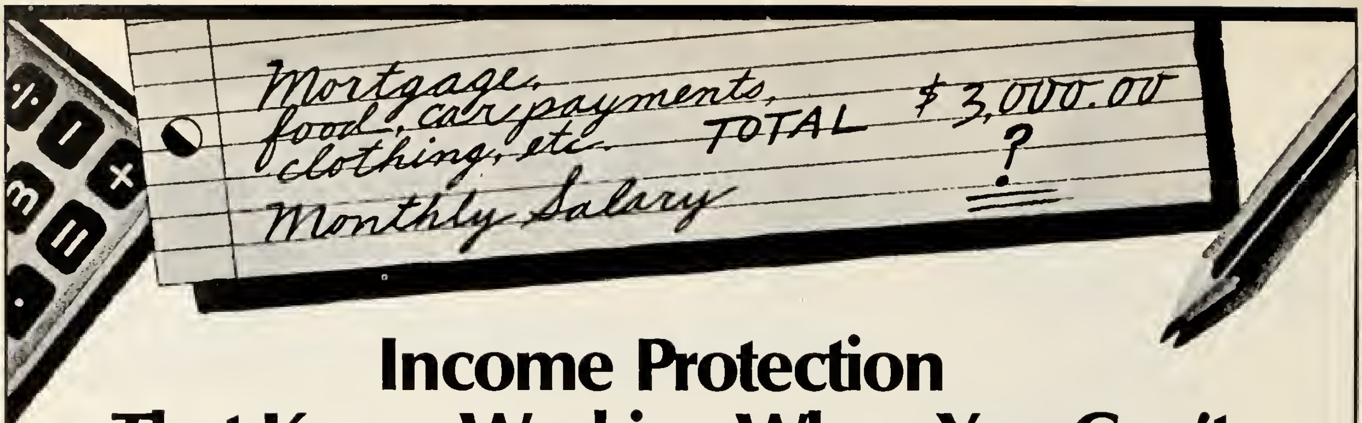
Diagnostic code file.

There are many other computer functions that can be valuable for your practice - for example, being able to develop a list of your most frequently performed services and the frequency of use, of referring patients and physicians, of insurance companies billed and their reimbursement for specific procedures. I suggest that you write down all of your computer needs and also consult with your staff as to their needs before you make a final decision on a computer so that no need will go unmet.

Note to Readers:

For those physicians whose Medicare carrier is General American, the reimbursement for a surgical tray (discussed in last month's column) is included with the surgical procedure and not paid separately. This is a long-standing pol-

continued on page 74


Mortgage, food, car payments, clothing, etc. TOTAL $3,000.00
Monthly Salary ?

Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance programs offer you coverage and cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: **James**

FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

- ☐ Personal Disability Income
- ☐ Office Overhead Expense
- ☐ Hospital Indemnity Plan
- ☐ Accidental Death & Dismemberment Insurance

Name ____________________

Address ____________________

City ____________ State ____________ ZIP ____________

Phone: ( ) ____________ Best time to call: ____________

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

GUEST EDITORIAL

by James J. Benjamin, M.D.

A new practice of reading makes it possible to read with greater effectiveness.

Making Medical Reading Count

This may seem like a strange title for an article. Why would someone write about a skill that all physicians have long since mastered? We've been reading from our earliest days; some of us even before entering a schoolroom. Because we all have been obligatory readers for years, what could be said about reading medical articles* that is new?

To begin to answer that question, let me state the obvious: reading is a practice, that is, a behavior that is learned and can be modified. And, most of us never examine our practice of reading; it has become automatic for us.

I first encountered these ideas in the paper, "Reading A Text," prepared for the Ontological Design Course, by Fernando Flores and Michael Graves, Berkeley, Calif., published March 1986.

I will list some of our automatic reading habits, then give some ideas for modifying the practice of reading to make it more effective. By "more effective," I mean that our reading will be able to produce more in the way of new ideas and actions, as a result of designing** a new practice of reading. This new practice can evolve, much as it does when we design a new practice of taking a history or performing a physical examination, in order to make new observations we weren't able to make before.

James J. Benjamin, M.D., is a practicing internist and pulmonologist. His address is 653 Old Mill Road, Millersville, Maryland 21108.

Why should we consider designing new practices of reading? One reason is that we can't read everything; the amount of scientific data being produced far outstrips our time to read it, and the situation is getting worse all the time.

One solution is to read more *selectively.* Most of us read to obtain information, and we try hard to remember the important material we read. A new practice of reading might make it possible to read with greater *effectiveness* as well; that is, to apply the information with more clarity and creativity, to see possibilities for actions that aren't available using our current reading practices.

My claim, then, is that by designing our reading practice as outlined, we can select our reading material more efficiently, and then begin to read with greater understanding and productivity.

Designing Your Reading: Environment

Although reading for our profession is one of our key activities, rarely do we pay enough attention to where we read. Yet, we can design an environment that supports a mood for reading and, therefore, make the most of our reading time. Here are some simple suggestions for designing such an environment:

---

*As implied in the title, this brief article describes a technique intended primarily for reading scientific texts in the medical literature, rather than other kinds of reports and medical material we read as physicians.

** I use the word "design" to mean observing current practices of reading, then modifying those practices to reveal new possibilities of understanding and taking action.

1. Make sure that where you read is quiet and well-lit, and that the room temperature and the chair in which you sit are comfortable. Many of us just grab a journal off the shelf, flip through it while sitting or standing almost anywhere, and think we will remember and use what we have read.
2. Set aside at least 30 minutes of uninterrupted time. If necessary, have your answering service take your calls and - yes - turn off your beeper. After all, this is YOUR time to read and it is important.
3. Keep a glass of water nearby and have a pad of paper handy. Now you have almost no reason to get up. If you get distracted by thoughts of things you need to do later, jot them down on your pad and keep reading. Do the same with ideas that occur to you as you read.
4. By following these steps (and any others that you find work for you), you will have set yourself up to be in a reading mood. With reading, as in many human activities, the mood makes the accompanying actions not only possible, but increasingly pleasurable.

Designing Questions for Reading

When we read, we are always asking questions. They are automatic, and we are often unaware of them: "What do I need to know from this paper?" "What will my peers expect me to know?" "What is the best way to treat this condition?" "How well is this protocol constructed?" "What is good medical care in this kind of case?" "What would I do in this situation to avoid a malpractice suit?"

These kinds of questions will continue; there's nothing we can or should do about them. There are, however, specific questions that, if consciously asked, will deepen the experience of the reading. This conscious addition of specific questions is where the design of a reading practice begins. Questions allow the reader to interact with the text in a new way. By asking the question, for example, "What are the assumptions the authors have made in the design of this study?," I will read a particular article in a different manner than I could have without that question in mind, noticing details about the text that would not have been apparent to me before. Here are some questions to ask before reading.

Why am I reading this article? What led me to pick up this particular article? Was it that the topic is one within a special interest or competence of mine? Did I care for a patient with a similar problem? Was the outcome favorable? Unfavorable? Is this a topic I wish to review? Am I interested in the whole article or just the conclusions? What is my current knowledge about this topic?

Maybe I'll find that I don't know why I selected this article. Asking this question can be helpful in selecting just those papers in which I have a special interest.

As I begin to read another question to ask is: **What am I learning as I read?**

This question allows me to focus on whether the material is new information or a new interpretation of older observations. It helps me to juxtapose and evaluate my present information with what I am now reading.

In this regard, many of the article's new terms will be spelled out by the author: for instance, how a study group is defined, what is considered a "response" to a treatment, the exact pathological definition of a new disease entity or a description of a physical finding and its physiological correlation. Others will not be so obvious, such as assumptions the authors have made in designing their study and drawing their conclusions, or previous scientific thinking on which the present work is based.

During and after reading the article, yet another question to ask is: **What ideas or possible actions have occurred to me from reading this article?**

This question may trigger other questions, such as "What can I do with this new information?" "What actions are possible for me now that weren't possible before?" "What new conversations can I now have with my colleagues or my patients?"

The question may also trigger some observations worth noting. For example, "I can see how this new information extends what I already knew." "The authors missed a point here. How can I communicate this to them?"

After considering this question in my reading recently, I went to our hospital pathology department to suggest a new way of reporting partial thromboplastin times. Without asking this question, I doubt the action would have occurred to me.

These suggestions for designing a reading environment and a practice of reading with questions will help you effectively to select articles to read. They also will enable you to read with greater comprehension and productivity than before. Those of us who use this reading practice have found the job of keeping current easier and even more enjoyable. I invite you to add these ideas to your own practice of reading and see what happens.

Special Editorial

by Ramona M. Chapman, M.D.
Associate Editor

Tobacco or Health?

... deny the government warning: action on smoking can seriously damage your political health.

The World Health Organization recently sponsored the first European conference on tobacco policy. One hundred fifty people met in Madrid to discuss "Tobacco or Health: The Way Ahead." The British Medical Journal has wryly commented on the consequences of the convocation. "The delegates were divided into groups which stayed together throughout the week and thrashed out their recommendations on the key issues—basic epidemiology, environmental tobacco smoke, understanding the industry, consumers' rights, tobacco economics, and the control of prices. The result was a draft charter against tobacco for Europe and 10 strategies to eliminate the death and disease caused by the industry's products. These were put to the government ministers (or in one case a senior civil servant) of six nations by the British television journalist Peter Taylor. Politely but firmly he squeezed out of them commitments some will wish they had not made, challenging them to deny the government warning: action on smoking can seriously damage your political health.

"One by one the ministers promised to consider various actions. Perhaps most interesting was the unanimous promise to consider taking tobacco out of the retail price index. So long as the price of tobacco is kept down to keep down inflation, then in a real sense people's lives are being traded for lower inflation. This unsavoury practice ought not to be politically acceptable. Knowing what a sensitive political issue this can be, the conference hardly expected the ministers to rush to their cabinets and do something. Their very presence at the conference and willingness to be confronted by a seasoned political journalist, however, illustrate the unusual achievement of this conference in bringing together policy advisers and policy makers. Tobacco control workers are no longer just talking among themselves."

The Missouri Department of Health has recently conducted a survey of our state legislators to learn their attitudes concerning cancer control and especially concerning lung cancers caused by tobacco. A report is featured in this issue (page 95). The quality of the results is compromised by the failure of more than half of the legislators to respond, thus matching, more or less, the failure of the electorate to vote.

Those who did respond ranked cancer as the state's most important health issue. But tobacco ranked fifth when the legislators were asked to select the most important programs for protecting or improving the health of Missouri residents. Some voted for seat belt use, but far and away at the top of the list is Sexually Transmitted Disease. AIDS captures attention.

It is heartening, however, that the legislators tend to the support of several legislative items. The Clean Indoor Air Act is Number One, and Number Two is Funding for Local Health Department Cancer Prevention Programs. The authors of the report are more optimistic than the British. Legislator recognition of the importance of cancer and the positive response to regulatory issues indicate an optimistic future for cancer control legislation in Missouri.

Help for the Impaired Physician

The Missouri Physicians' Health Program (MPH Program), under the auspices of the MSMA and the Missouri Physicians' Health Committee is available to help Missouri physicians suffering from alcoholism, drug dependency, psychiatric illness and physical impairment.

The purpose of the program is to facilitate the physician's return to healthy personal and professional functioning through early intervention, treatment referral, monitoring and advocacy.

The MPH program is independent of the licensure and regulatory agencies, such as the Board of Healing Arts, the Bureau of Narcotics and Dangerous Drugs and the Drug Enforcement Administration.

Physicians who voluntarily participate in the program have the opportunity to arrest the progression of their disease and resultant impairment of their disease and resultant impairment before public exposure occurs and before disciplinary actions on licensure and clinical privileges are taken.

If you suspect that you, a colleague, a friend or a relative is impaired, please call our Confidential Assistance Hotline at (314) 768-4990. All communications are kept strictly confidential.

You need not leave your name. However, for adequate follow-up, your name and telephone number as well as the names and telephone numbers of others familiar with the problem will be helpful. The questions which will be asked are those which are necessary to enable the committee to objectively verify that a problem exists, assess the situation and plan the best course of action for the impaired professional.

Missouri State Medical Association
Missouri Physicians' Health Committee

Jack Croughan, M.D., Medical Director
(314) 725-4004

Jack Carmody, M.D., Chairman
(314) 843-2151

Karen Sanders, Program Coordinator
(314) 768-4990

Thomas M. Ahmann, M.D.
(314) 581-7582

Hugh C. Bartlett, M.D.
(314) 364-6051

Clyde M. Burnham, M.D.
(417) 625-6646

James R. Criscione, Jr., M.D.
(314) 352-7003

Edward C. Felker, III, M.D.
(314) 471-6992

Donald McIntosh, M.D.
(816) 444-1139

Carl C. Pearman, M.D.
(417) 885-4191

C. E. Ridenhour, M.D.
(314) 874-3111

Jo-Ellyn M. Ryall, M.D.
(314) 868-7700

William I. Stryker, M.D.
(314) 647-0411

David White, M.D.
(314) 365-2111

Because Cape City Cave in Cape Girardeau has a tight bend to the left upon entering, Stanley Sides, M.D., finds it easier to back into the cave rather than going headfirst.

Exploring the Underground

By Valerie A. Peters

For many physicans, there's no place like home in their spare time. Yet for Southeast Missouri internist Stanley Sides, caves are his hobby and his "off-duty" abode.

"Mammoth Cave is almost like home to me," according to this active caver. "So many years, so many days and nights spent underground. It's like home."

Hearing him talk about his hobby reveals Sides' belief that medicine is one career and caving is the other. Dr. Sides got a taste of caving while attending Boy Scout Camp Lewallen, near Silva, MO. Eleven-year-old Sides discovered a spring near camp and decided to do a little exploring.

"Several hundred yards away from the camp was a little sink hole," he says. "Of course, we were told not to go in there. It was a cave and they had tried to block the entrance.

"It was very tight, but we could squeeze in to the little cave. We ventured in about 70 or 80 feet, but inside was a stream," he continues.

"It became clear to me that the water coming up that spring several hundred yards away at camp was this same stream," he says. "So I really got intrigued with the concept of solution of rock and water flowing underground."

His interest piqued, Sides researched his local library and found a book, "Caves of Missouri," which he read from cover to cover. Pretty soon he began to ask people he knew, and some he didn't, where caves were in the area. Once he found out where the caves were, he started talking people into driving him up to see the caves, since he was

Above: Dr. Sides and fellow cavers emerge from Dorothy Taylor Cave near Perryville, Mo., after a full day of surveying. This cave is a 4700 foot system. Below: Along with Dr. John Sharp of Southeast Missouri State University, Dr. Sides is studying the blind cave fish in the Blue Gulf Cave located in Wayne County, MO. This water-filled cave is 600 feet long and has water depths over 200 feet, hence the scuba gear worn by Dr. Sides in this photo.

too young to drive. In a short time, Sides had found more than 100 caves in Perry and Cape counties.

"I started meeting a man from St. Louis who would drive down with other cavers," Sides says."Tex Yokum - a great caver. He just died two years ago. Tex taught us how to survey, so we started mapping the caves."

Since then, Sides has done much more than just map the caves around Perry and Cape County. In 1962, Sides was a freshman at Southeast Missouri State University. That year, he started driving to Mammoth Cave, the world's longest cave system. And that was just the beginning of his 26-year affair with Mammoth Cave.

Mammoth Cave is located four and a half hours east of Cape Girardeau, right in Central Kentucky. According to Dr. Sides, Mammoth Cave formed by water finding an easier route to major streams. Basically, water found it easier to run through the rock and down vertical shafts than to run across the surface.

So far, Sides and his fellow cavers are responsible for mapping more than 340 miles of the Mammoth Cave system. Every month, members of the Cave Research Foundation, of which Sides is a past president, organize a 3-4 day caving expedition on which they map more of the cave system.

"When you go in," Sides says, " you'll usually go 12-24 hours because you're working miles from the nearest entrances. Here in Missouri, we tend to have shorter cave trips."

"Surveying is awfully important," Sides says. "Caving is the only hobby in which the only way to demonstrate your progress, what you've done, is to make a map. We have to make maps as they are the only way of understanding what we're doing, where we've been and where we're going."

The easiest way to keep track of all

Dr. Sides prepares to go through the man-made gate over the Woodson entrance to the Mammoth Cave in Mammoth Cave National Park. The fearless spelunker is using a rappel rack to descend the 35 foot drop into the cave. A little cave trivia: According to Sides, spelunker and caver are one and the same.

the data the cavers gather on their caving expeditions, is to feed it into a computer. Sides says he became interested in computing when he was in medical school at the University of Missouri-Columbia School of Medicine from 1964-1968.

"After we go in the cave, we survey and come out with all this data, so we use the Macintosh to reduce the survey data and plot a preliminary map for us," Sides explains. "Then we plot the cave passages on gridded veloum.

"After the caves are mapped, the maps are turned into the Missouri Department of Geology and Land Survey at Rolla. They become part of the resource file of the Department of Natural Resources."

The 45-year-old Sides doesn't show any signs of letting up on his hobby. Not only does he continue to head caving expeditions, he also teaches a course for Western Kentucky University on - what else - the Exploration of Mammoth Cave.

"I began teaching the summer course in 1985," Sides says. "The first summer there were nine students. And the first day I took them into the cave until about eleven at night. The next morning I lectured for an hour and a half then took them in Mammoth Cave for a seven-mile trip!

"My students sort of think of me as this crazy doctor who happens to be an authority on the history of miles of the Mammoth Cave System," he says, laughing.

Now the course fills quickly to the maximum number Sides can take which is 20 students. He says you have to be in good shape to take the course because each day the class goes into the cave for five to seven miles of caving.

"Most of it is easy walking, but it's far from the tourist routes," he says. "I try to point out areas of saltpeter mining and explore the important connections that integrated this into the world's longest cave system."

For those interested, Sides will be teaching the course again in 1989 from June 7-July 1 at Mammoth Cave National Park.

Sides' interest in the Mammoth Cave doesn't just exist underground. He has also hiked the trails on the surface of the cave and recently started a new project.

"When I was made vice president of the Mammoth Cave Nature Association, one of the things we decided we needed was a written guide to the surface trails of Mammoth Cave National Park," Sides says.

"So a year ago, I started hiking all 70 miles of surface trails. As a physician, I have to optimize my time. So I use a Macintosh computer to keep track of my trails data. This allows me to avoid enormous rewriting."

Sides says his primary goal is to

make the guide not just a guide to the surface, but a guide that tells you as you go along what cave you are over or what passages are underneath you. He wants the guide to help readers relate their hiking on the surface trails to what lies in the cave underneath.

Caving for Sides has, at many times been a family affair. His sons, David, 18, and Steven, 16, both "sort of grew up at Mammoth Cave."

"Both of them are good cavers," Sides says. "My wife, Kay caves too. But she has spent much more time raising two sons while I was underground caving all those years."

Sides met his wife at the medical school library at MU in Columbia.

"When I was in med school, whenever we had free time, we would go to Devil's Ice Box at Rock Bridge State Park," Sides says. "This was before the park was organized, though.

"We got trapped in there one night," Sides admits. "It was threatening rain when we went in. There were three of us guys. As we were coming out about seven or eight in the evening, the water level was clearly high. The bats weren't leaving.

"So we got on our innertubes and tried to go out but the water was too high. Right near the entrance to Devil's Ice Box was only about 14 inches of air space. So we couldn't go through. And this was Sunday. We had class on Monday!

"So we sat in there most of the night back where it was high above the stream and safe, worrying whether our girlfriends would call the sheriff. Luckily, they didn't, and at about four in the morning, we noticed the bats were beginning to leave. And with that we hopped on our innertubes and came out to a nice, beautiful morning as we climbed out of the sink hole at the Devil's Ice Box."

Now that's enough to cause the weak at heart to swear off caving for good. But not Sides. To him, that was just part of the fun. In a way, caving had become an addiction for him.

Proof in point, Sides tells of how many times while he was in medical school, he would take the bus from Columbia on a Friday to downtown St. Louis. Dr. Richard Watson, a philosophy professor at Washington University would pick him up at the bus station. They then drove all night to get to Mammoth Cave and got there at about three or four in the morning. They would cave for 18 or 20 hours, come out on Sunday at four or five in the evening, try to stay awake driving back, then Sides would hop on a bus back to Columbia, getting in around eight or nine on Monday morning. Whew, how's that for a full weekend?

In 1970, Sides went in the service and spent a year as a battallion surgeon in Vietnam with the Marines.

"There were no caves there except some caves filled with booby traps at a place called Marble Mountain. I tried to get to them, but we thought it was just too dangerous in there, so I did no caving for a year in Vietnam," Sides says.

In 1972, he returned to Columbia to do his second year of residency and to begin a two-year fellowship in hematology and oncology. It was during this time that he became president of the Cave Research Foundation.

While he was president, the organization decided that after years of searching, it might actually be possible to connect Mammoth Cave with about 45 miles of Flint Ridge Cave system which is about 100 miles of cave located east of the Mammoth Cave Ridge.

The group accomplished that feat.

"That resulted in our organization writing the book called, "The Longest Cave," Sides says, proudly. "I had a role in the writing of the book. In 1972, we found 140 miles of the cave and now we've got more than 340 miles and it is still going."

After so many years of caving and so many feats accomplished, is the thrill gone? Not for Sides. The thrill of caving for him is no longer the discovery of a virgin cave - he's done that time and again.

"I think the main thing now is not so much the caves per say, but all the fun people and all the hours of getting together," he says. "So much of the fun of caving is after we've done our caving, to come home and key it into the computer and in a couple of hours we know exactly where we've been and where the cave is headed."

Bev Graves, who works in Dr. Sides medical office, is also a caver. She has gone on numerous caving expeditions with Sides and says it's never boring.

"Caving is different from anything else," Graves says. "You never know what's around the next corner."

Sides agrees that caving is more than just mapping, even though surveying is important.

"I don't go just to map caves, " he says. "I enjoy the computer work, and it's fun sharing with others. We all somehow don't mind crawling around in mud and water, sometimes being terribly miserable. We still have a good time.

"I keep thinking that if I retire young enough to still be healthy that by the time I'm 70, I may finally begin to understand all the caves, all the years of work with good friends," Sides continues. "Socially, it's a lot of fun. It's team-oriented. I've had a lot of fun with my sons, with other young people, with Tex Yokum and all the other cavers. You get to be real good friends."

☐

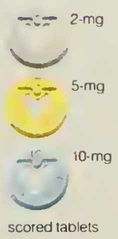
MISSOURI
DAW
MD
DISPENSE AS WRITTEN

The practice is yours.
The patients are yours.
The prescriptions are yours.

Make the prescribing decision yours, too.

Sign on the right on
the "Dispense as written" line.

Specify VALIUM®
brand of
diazepam/Roche (IV)

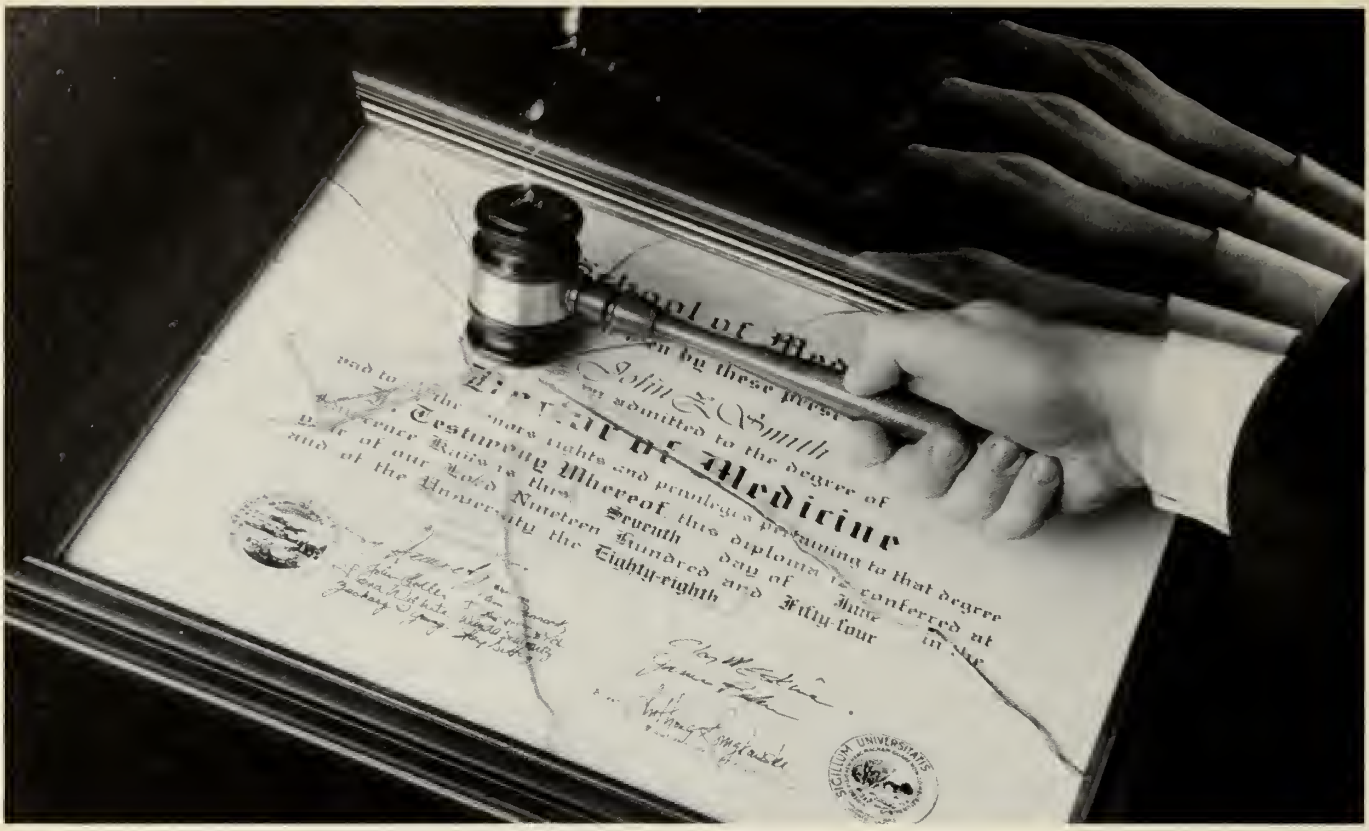

2-mg
5-mg
10-mg
scored tablets

The cut out "V" design is a registered trademark of Roche Products Inc.

The one you know best.

Copyright © 1988 by Roche Products Inc
All rights reserved.

ROCHE Roche Products
Roche Products Inc
Manati, Puerto Rico 00701



"Cheaper Insurance" May Cost You Much More Than You Think

The financial loss in a malpractice suit is covered by most liability insurance policies. **But how do you protect your reputation?** At Risk Control Associates, we understand the high value you place on your reputation because we are physicians ourselves.

We boldly and aggressively defend non-meritorious claims, and our "Consent to Settle" clause lets you decide whether or not a claim will be settled. This means that your reputation will not be put on the line for the sake of "expediency." A convenience settlement is not in your best interest.

With Risk Control Associates, you have a choice in your legal representation. This means that you will have confidence in your legal defense. You know that your attorney is working on your behalf. With some "cheaper insurance" groups you are assigned a lawyer from a single firm that handles all cases for that group. You are not given a choice, so the lawyer really works for the insurance company — not for you.

RCA offers both Occurrence and Claims-Made coverage to all medical classes. By offering you a choice of plans and a range of liability limits, you are sure to find the coverage that best suits your practice. Our rates are competitive with comparable programs and based on **sound actuarial projections.** We offer a whole range of flexible payment options. We guarantee that **there are no hidden charges** which can suddenly appear with "cheaper insurance" programs.

Now may be the best time for you to consider your medical liability insurance needs. Risk Control Associates offers a sound, financially stable program for maximum coverage. "Cheaper insurance" sounds attractive, but look beyond the price tag. Quality demands a price, and when it comes to your reputation, you need quality protection. Risk Control Associates offers quality plans, personal service and the assurance that you have the support of "Physicians helping Physicians."

Call us today for more information or a quotation. We will gladly send it to you without obligation. Call (800) 422-5122 or (417) 862-0650.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS
1111 South Glenstone • Springfield, Missouri 65804

Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

Carcinoma of the Pancreas

Is Treatment Worthwhile?

Delia M. Garcia, M.D.
George Tucker, M.D.
St. Louis, Missouri

A study of 60 patients with adenocarcinoma of the pancreas demonstrates the poor prognosis associated with this disease. Unless patients had localized, resectable tumors, survival was virtually unchanged by any treatment prescribed.

Adenocarcinoma of the pancreas remains a dreaded disease that is almost always fatal, regardless of treatment. The overall five-year survival rate of less than 5% has not improved despite advances in surgery, radiation, and chemotherapy.

Although surgical resection is the only treatment that offers a curative potential, only a small percentage (0-30%) of patients are diagnosed at a stage suitable for radical surgery.[1] In the patients subjected to radical surgery, the operative mortality ranges from 0-60%.[1]

Palliative treatment with chemotherapy and radiation therapy has also proved frustrating, since it is difficult to prove that any treatment significantly prolongs patient life span. In a disease with dismally low survival rates and high morbidity and mortality, should aggressive treatment even be attempted?

This study evaluates a consecutive series of patients with adenocarcinoma of the pancreas admitted to one hospital and managed by a relatively small group of physicians. Treatment regimens were compared to determine whether any treatment significantly contributed to survival or quality of life.

Material and Methods

From April of 1981 through December of 1985, 60 patients with adenocarcinoma of the pancreas were admitted to St. Luke's Hospital, St. Louis, Mo., for diagnosis and treatment. There were 29 men and 31 women ranging in age from 38-90 years, with a median age of 67. Fifty-five patients were white and five were black. Pain was the most common presenting symptom (Table 1).

The diagnostic tests performed varied, but the most common method of diagnosis was computed tomography (CT) scan, which verified tumors in 55 patients. Tissue for pathologic confirmation was obtained in all patients. Four patients underwent radical resection, 29 underwent a palliative bypass procedure, and 10 had exploratory operations with biopsy. Of the 17 patients who did not undergo laparotomy, diagnosis was made by liver biopsy in nine patients, by pancreatic biopsy in seven patients, and by bone biopsy in one patient, each obtained percutaneously.

Only four of the 60 patients (7%) had localized tumor deemed resectable for curative intent. The remaining patients had tumor too advanced for consideration of resection (Table 2). The 56 patients with cancers not amenable to radical resection were treated in a variety of ways, depending on many factors, including age, overall medical condition, philosophy of the surgeon and managing physician, patient preference, and referral patterns.

Fifteen patients received chemotherapy alone and seven patients had chemotherapy combined with radiation. The chemotherapy consisted of 5-FU, Adriamycin, and mitomycin C in 15 patients and 5-FU alone in seven patients. The nine patients receiving radiation (combined with chemotherapy in seven patients) had tumor doses ranging from 4000-5000 cGy delivered with 18 MV photons.

All patients were followed until death or for a minimum of eight months. Survival was calculated from the time of tissue diagnosis.

Results

Survival

Figure 1 shows actuarial survival for the 60 patients according to the extent of disease at presentation. The four patients who had disease confined to the pancreas and had radical surgery survived significantly longer than all other patients. Of the 56 patients who presented with unresectable tumor, those with regional disease had a longer survival than those with distant metastases. Survival was not influenced by treatment in the patients presenting with unresectable tumor. Actuarial, mean, and median surviv-

Table 1

Presenting Symptoms

Symptom	*Number of Patients**	%
Pain	42	70
Anorexia	30	50
Weight loss	29	48
Jaundice	25	42
Nausea/Vomiting	23	38
Clay-colored stools	16	27
Pruritus	14	23
GI bleeding	2	3

*Some patients presented with more than one symptom.

Table 2

Tumor Extent at Diagnosis

Tumor Extent	*Number of Patients**	%
Liver	29	48
Local invasion	23	38
Regional nodes	11	18
Lung	4	7
Carcinomatosis	2	3
Bone	2	3

*Some patients had more than one site of tumor spread.

als (Table 3) were similar regardless of whether the patient received chemotherapy and/or radiation or no treatment other than palliative bypass surgery or biopsy only.

Of the 60 patients, eight patients (13%) who had distant metastases died within 30 days of diagnosis; 29 patients (48%) lived longer than one month but died within six months; and eight patients (13%) lived more than six months but died within the first year. Only 15 patients (25%) lived longer than one year, and 12 of these patients survived less than two years. Of the three longest survivors, one patient is alive, clinically free of disease, at two years and four months, and one patient died of recurrent tumor at three years and one month; both patients had been treated with radical surgery. The third patient was treated with radiation alone and died of disease at two years and four months after diagnosis. Of the 12 patients who survived more than one year but less than two years, two patients had had disease localized to the pancreas and underwent radical surgery, eight patients had regional disease, and two patients had had distant metastases at the time of diagnosis. The treatment in these 12 patients was radical surgery in two, chemotherapy in five patients, chemotherapy combined with radiation in two patients, and no treatment in three patients.

Cause of death

At the completion of the study, 57 patients were dead, and one patient was living with known tumor.

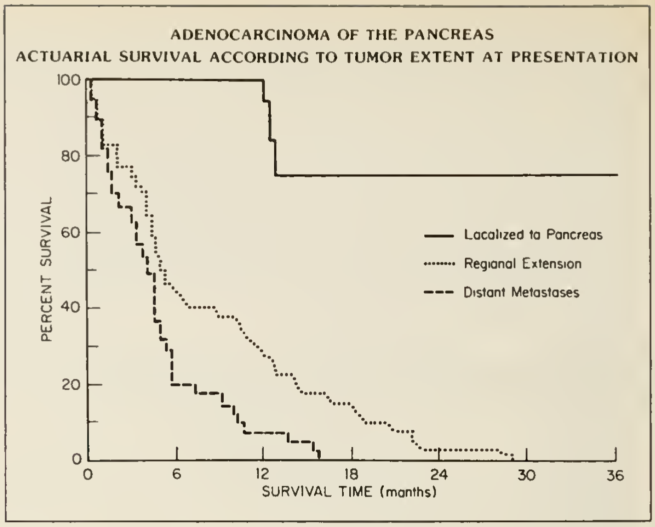


Fig 1. Actuarial survival for 60 patients with adenocarcinoma of the pancreas according to tumor extent at presentation.

Two patients, both treated by radical surgery, were alive without evidence of tumor at one year three months, and two years four months, respectively. Of the 57 patients who had died, 52 died of uncontrolled tumor, three died postoperatively, and two patients died of intercurrent disease (both with uncontrolled tumor).

Complications

There were no serious complications as a result of radiation or chemotherapy. Likewise, no complications occurred in patients who received no treatment other than a biopsy, regardless of whether the biopsy was performed percutaneously or by laparotomy. There were major complications in two of the four patients who had radical surgery with curative intent, in contrast with five patients of the 29 who had palliative bypass surgery. Table 4 shows the complications according to type of surgery.

Quality of Life

It was difficult, if not impossible, to quantitate subjective and objective response to chemotherapy and radiation. The vast majority of patients were not subjected to serial radiographs to assess tumor response, but were evaluated clinically. The patients who died deteriorated and eventually died of progressive inanition.

The only well-documented objective assessment of quality of life available for all patients was the number of days spent hospitalized. Table 5 shows the range and average number of days hospitalized according to treatment.

Discussion

The longest survival in our study was in patients who had tumor confined to the pancreas and underwent radical surgery for potential cure. However, as in other reports,[1] the percentage of patients with cancer of the pancreas who present with resectable tumor

Table 3

Survival According to Extent of Disease at Presentation

Extent of tumor	*Range (Months)*	*Mean*	*Median*
Localized to Pancreas (4 patients)	12-38	24	22
Regional Extension* (32 patients)	0-29	8	5
Distant Metastases (24 patients)	0-15	5	4

*Includes patients with local invasion of surrounding structures and regional lymph nodes.

Table 5

Days Hospitalized According to Treatment

Treatment	*Range*	*Average No.*
Radical surgery	17-131	63
Radiation	15-39	27
Chemotherapy	5-98	34
Radiation and Chemotherapy	31-78	53
No treatment*	3-117	30

*Includes patients with biopsy only and palliative bypass surgery.

Table 4

Complications According to Surgical Procedure

Surgical Procedure	*Number of Patients*
Radical surgery for cure	2/4 (50%)
1. Abdominal abscess, heart block, respiratory failure	
2. Massive GI bleed and anastomotic leak; mechanical ventilation required for 3 weeks	
Palliative bypass surgery	5/29 (17%)
1. Postoperative death	
2. Postoperative death	
3. Obstruction of gastrojejunostomy	
4. Formation of pancreatic pseudocysts requiring laparotomy for drainage	
5. Wound infection	

is small. Only 7% (4/60) of our patients had localized tumor amenable to potentially curative surgery. The average survival of 23 months was similar to other reports[2] of patients treated with total pancreatectomy or Whipple procedure.

Mean and median survival of patients with unresectable disease invading local surrounding structures and/or regional lymph nodes was significantly higher than patients presenting with distant metastases. This confirms other reports[3, 4] that extent of disease at presentation is of major prognostic significance. However, survival in these patients was not significantly influenced by chemotherapy or radiation, but appeared to be simply a function of tumor burden at presentation.

Importantly, patients who received chemotherapy and/or radiation had no serious complications as a result of treatment and the amount of time hospitalized did not appear to be adversely influenced by the treatment. Conversely, radical surgical treatment resulted in a 50% incidence of serious complications compared with a 17% incidence in patients undergoing palliative bypass surgery. High morbidity rates have been confirmed by others[5] in the surgical treatment of pancreatic cancer.

Despite continued interest and research in pancreatic cancer, the overall five-year survival rate of less than 1%[6] is discouragingly dismal. The main reason for this poor prognosis is the inability to make a diagnosis before the tumor has already spread beyond the pancreas. Patients usually experience vague signs and symptoms nonspecific for pancreatic disease. The potential for significant improvement in survival rests on the development of better screening and diagnostic techniques.

We did not find any evidence that patients who have unresectable cancers of the pancreas benefit by chemotherapy or radiation. Although these treatments are well tolerated and there is a negligible incidence of complications, they are costly. In a population of patients in which survival is measured in terms of days or months, it is hard to justify the expenditure of time and money on treatment that does not substantively influence survival. In a disease with such an extraordinarily poor prognosis, continued research to improve survival is justified.

References

1. Gudjonsson B, Livstone EM, Spiro HM: Cancer of the pancreas. Diagnostic accuracy and survival statistics. *Cancer* 1978;42:2494-2506.
2. Forrest JF, Congmire WP Jr.: Carcinoma of the pancreas and periampullary region. *Ann Surg* 1979;189:129-37.
3. Kalser MH, Barkin J, MacIntyre JM: Pancreatic cancer: Assessment of prognosis by clinical presentation. *Cancer* 1985;56:397-402.
4. Kalser MH, Ellenberg SS: Pancreatic cancer: Adjuvant combined radiation and chemotherapy following curative resection. *Arch Surg* 1985;120:899-903.
5. Baden H, Sorenson TI: The Whipple operation in 37 patients with periampullary carcinoma. *Am J Surg* 1979;137:624-628.
6. Aoki K, Agawa H: Cancer of the pancreas, international mortality trends. *World Health Stat Rep* 1978;31:2-27.
7. Gastrointestinal Tumor Study Group: Radiation therapy combined with adriamycin or 5-fluorouracil for the treatment of locally unresectable pancreatic carcinoma. *Cancer* 1985;56:2563-2568.
8. Cullinan SA, Moertel CG, Fleming TR, et al.: A comparison of three chemotherapeutic regimens in the treatment of advanced pancreatic and gastric carcinoma. *JAMA* 1985;253:2061-2067.

The Authors

Dr. Delia M. Garcia is from the Radiation Oncology Center, Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, Missouri. She is the Clinical Chief of Radiation Oncology at St. Luke's Hospital, Chesterfield, Missouri.

Dr. George Tucker is Chief of Surgery at St. Luke's Hospital, Chesterfield, Missouri.

Reprints: Delia M. Garcia, M.D., Radiation Oncology Center — Box 8131, 4939 Audubon, Suite 5500, St. Louis, Missouri 63110.

Erythrocyte Pyruvate Kinase Deficiency

A Case of Severe Congenital Hemolytic Anemia

Timothy A. O'Connor, M.D., Carlos M. Monzon, M.D., and Frank I. Clark, M.D.
Columbia, Missouri

Although it occurs rarely, erythrocyte pyruvate kinase deficiency is a cause of neonatal jaundice and anemia across many ethnic and geographic groups. In this report of a Missouri case, an infant with this condition was also found to have Pelger-Huet leukocyte anomaly.

In the newborn, a hemolytic process is often detected during the evaluation of jaundice or anemia. Hemolytic anemia is defined as a pathologic process that results from the shortening of the normal erythrocyte lifespan. In the absence of hemorrhage, a hemolytic process in the newborn is characterized by an elevated reticulocyte count, nucleated red blood cells, and a declining hemoglobin (Hb). This report describes the clinical characteristics of a Missouri infant with erythrocytic PK deficiency and a coexistent Pelger-Huet leukocyte anomaly.

Case Report

A 2780 gm female infant was born at term to a 22-year-old Caucasian gravida 2, para 1, aborta 1 mother, whose pregnancy was complicated by a two pack per day smoking habit, and self-limited upper respiratory symptoms four weeks before delivery. Maternal blood was Group A, Rh negative (A−) and the father was Group A, Rh positive (A+). The mother had received Rho (D) immune globulin at 28 weeks of the present gestation and following the spontaneous abortion of an eight-week pregnancy two years previously. The father was known to have Pelger-Huet leukocyte anomaly. There was no family history of consanguinity, Amish background, jaundice in the newborn period, splenectomy, gallbladder stones at an early age, or anemia.

The infant was born by Cesarean section after the onset of fetal distress during an otherwise unremarkable labor. At birth, the infant was tachypneic, had grunting respirations, and appeared lethargic. Apgar scores were 5 and 9 at one and five minutes, respectively. The physical examination revealed generalized pallor, a liver span of 6 cm, and a spleen 4 cm below the left costal margin. The infant was normocephalic and had no evidence of petechiae or cataracts.

Laboratory evaluation revealed the infant's blood to be Group A, Rh negative (A−), and the direct and indirect antiglobulin tests were negative. The Hb was 11.4 g/dL, the Hct was 36%, and the MCV was 105 fL. The WBC was 18,199 per cu mm with 25% neutrophils, 13% bands, 32% lymphocytes, 7% monocytes, 4% eosinophils, 15% metamyelocytes, and 750 nucleated red blood cells per 100 white cells. The platelet count was 135,000 per cu mm. The reticulocyte count was 50%. A blood smear revealed marked macrocytosis, anisocytosis, poikilocytosis, and Pelger-Huet leukocytes. The Pelger-Huet cells made up approximately 95% of the neutrophils, as in the infant's father. At two hours of age, a total bilirubin of 6.8 mg/dL with an indirect fraction of 4.6 mg/dL was found. A microbiologic evaluation which included bacterial cultures of blood, urine, and cerebrospinal fluid yielded no organisms. Viral cultures were negative. Chest film revealed no evidence of pneumonia. The infant's total serum IgM was 17.4 mg/dL, and serologic studies for *Toxoplasma gondii*, rubella, cytomegalovirus, herpes simplex, and syphilis did not indicate infection in the infant or the mother. A hemoglobin electrophoresis study on cellulose acetate showed a normal pattern for age, with Hb A of 33%, Hb F of 67%, and Hb A_2 of 1.5%. A Kleihauer-Betke stain of the mother's blood did not reveal fetal cells.

The infant received a 10-day course of ampicillin and gentamicin at 100 ml/kg/day and 7.5 mg/kg/day, respectively. She received two transfusions of packed red blood cells, 10 mg/kg each, because of congestive heart failure due to a rapidly declining hemoglobin, which eventually stabilized at 8 to 10 g/dL over the subsequent weeks.

At age 12 weeks, her Hb was 6 g/dL, her MCV was 94 fL and her reticulocyte count was 10%. A blood smear revealed marked anisocytosis, polychromasia, shrunken and spiculated erythrocytes and Pelger-Huet leukocytes. A marrow aspirate revealed erythroid hyperplasia and leukocyte precursors with the Pelger-Huet anomaly. Iron stores were abundant. A urine metabolic screen and a quantitative amino acid screen were unremarkable. Serum folate and B12 levels were normal. An erythrocyte enzyme profile (Scripps' Clinic and Research Foundation, La Jolla, Calif.) showed a pyruvate kinase level of 7.1 IU/g Hb (normal 11.1 to 18.9 IU/g Hb).

The patient has been observed to the age of 8 months and has continued to require packed red blood cell transfusions every five to seven weeks. Her growth and development have been normal. Laboratory tests at the 8-month follow-up revealed the following values: total serum bilirubin 2.0 mg/dL with indirect fraction of 1.6 mg/dL; reticulocyte count 8%; Hb 7g/dl; and Pelger-Huet cells 95%. Her spleen was palpated 3 cm below the left costal margin.

Discussion

Although erythrocyte PK deficiency is an unusual cause of congenital hemolytic anemia, it should be considered in the differential diagnosis of early jaundice and anemia in the newborn period. It is the most common defect in the glycolytic pathway to cause hemolysis.[1] This defect leads to markedly reduced adenosine triphosphate (ATP) levels, which causes inadequate red cell function and abnormal membrane permeability. These defective red cells are readily removed by the reticuloendothelial system.[2]

A survey of seven pediatric hematologists in the state of Missouri revealed that six cases of erythrocyte PK deficiency are now being followed, two of which have been diagnosed in the past five years. Worldwide, several hundred cases of PK deficiency have been described. These patients have primarily been found in the United States, Europe, and Japan, but cases have also been noted in Canada, Australia, New Zealand, and Hong Kong.[1, 3, 4] Both sexes are equally affected.[5] Although erythrocyte PK deficiency occurs in all ethnic groups, it primarily affects those of Northern European origin.[1] A particularly severe form with a high prevalence has been found among the Amish of Mifflin County, Penn.[6]

Erythrocyte PK deficiency is an autosomal recessive disorder. The frequency of heterozygotes is estimated to be 2.4 per 1000 persons.[4] Only homozygotes demonstrate hemolytic anemia.[7] It has been shown that liver and erythrocyte PK isoenzymes are coded by a single structural gene, which has recently been localized on chromosome 1.[8, 9]

Although erythrocyte PK deficiency has been found in combination with other red cell disorders such as beta thalassemia, hereditary spherocytosis, hereditary elliptocytosis and glucose-6-phosphate dyhydrogenase deficiency,[1, 10, 11] to our knowledge an association between erythrocyte PK deficiency and Pelger-Huet leukocyte anomaly has not heretofore been described in the literature. The Pelger-Huet leukocyte anomaly, an asymptomatic and harmless autosomal dominant trait, was demonstrated in this patient and her father. This anomaly is estimated to occur in one in 6,000 individuals. Affected individuals have mostly leukocytes with two nuclear lobes, but their function is normal.[12]

Because of the different mode of inheritance of both anomalies, there is no correlation between the erythrocytic PK deficiency and the Pelger-Huet leukocyte anomaly. In erythrocyte PK deficiency no pathognomonic clinical features, and no specific erythrocyte morphologic changes are found.[1, 13] The spectrum of the clinical presentation varies from a severe neonatal hemolytic anemia requiring multiple transfusions or exchange transfusions, to a fully compensated hemolytic process.[14, 15] Our case illustrates the manifestations of erythrocyte PK deficiency early in life. The degree of anemia and hepatosplenomegaly in this patient reflected the severity of the hemolytic process.

The diagnosis of erythrocyte PK deficiency depends on the demonstration of reduced enzyme activity by a spectrophotometric assay.[16] These quantitative measurements of erythrocyte PK activity can reliably be used to differentiate normals from heterozygotes or homozygotes.[1]

No specific therapy for PK deficiency is currently available, and patients are supported primarily with blood transfusions. Splenectomy is not curative as hemolysis clearly persists after this procedure. Beyond early childhood, most erythrocyte PK deficiency patients maintain a tolerable hemoglobin level without transfusions, except during exacerbations.[15] The chronic hemolytic process may be aggravated by various acute illnesses, and by pregnancy. Aplastic crises due to Parvovirus B19 infection have been recently described.[16] Because of the rapid red cell turnover, many hematologists recommend daily folic acid supplementation. In a fetus at risk for erythrocyte PK deficiency, amniocentesis might reveal increased levels of bilirubin and lead to a presumptive diagnosis.

As illustrated in this patient, the diagnosis of erythrocyte PK deficiency may be delayed because affected infants frequently require early red cell transfusions, which interfere with reliable enzyme measurements. From the genetic point of view, the combination of erythrocyte PK deficiency and Pelger-Huet leukocyte anomaly lack any correlation because of their different modes of inheritance.

References

1. Valentine WN, Tanaka KR, Paglia DE: Pyruvate kinase and other deficiency disorders of the erythrocyte, in Stanbury JB, Wyngaarden JB, Frederickson DS, et al (eds): *The Metabolic Basis of Inherited Disease*, ed 5, New York, McGraw-Hill, 1983, pp 1606-1628.
2. Monzon CM, Mohammad AM, James EJP: Evaluation of hemolysis in the neonate. *Cont Ed for the Fam Phy* 1984;19:211-226.
3. Vives-Corrons JL, Marie J, Pujades MA, et al: Hereditary erythrocyte pyruvate-kinase (PK) deficiency and chronic hemolytic anemia: Clinical, genetic and molecular studies in six new Spanish patients. *Hum Genet* 1980;53:401-408.
4. Satoh C, Neel JV, Yamashita A, et al: The frequency among Japanese of heterozygotes for deficiency variants of 11 enzymes. *Am J Genet* 1983;35:656-674.
5. Mentzer WC: Pyruvate kinase deficiency and disorders of glycolysis, in Nathan DG, Oski FA (eds): *Hematology of Infancy and Childhood*, ed 3, Philadelphia, WB Saunders, 1987, pp 545-582.
6. Bowman HS, McKusick VA, Dronamraju KR: Pyruvate kinase deficient hemolytic anemia in an Amish isolate. *Am J Hum Genet* 1965;17:1-8.
7. Tanaka KR, Valentine WN, Miwa S: Pyruvate kinase (PK) deficiency hereditary nonspherocytic hemolytic anemia. *Blood* 1962;19:267-295.
8. Bigley RH, Koler RD: Liver pyruvate kinase (PK) isoenzymes in a PK-deficient patient. Ann Hum Genet 1968;31:383-388.
9. Satoh H, Tan K, Yoshida MC, et al: The human liver-type pyruvate kinase (PKL) gene is on chromosome 1 at band q21. *Cytogenet Cell Genet* 1988; 47:132-133.
10. Neumann E, Schwarzmeier J, Honetz H: Hereditare elliptozytose und pyruvatekinasemangel der erythrozyten. *Wein Klin Wochenschr Wochen* 1972;84:712-715.
11. Brook J, Tanaka KR: Combination of pyruvate kinase (PK) deficiency and herediatry spherocytosis (HS) (abstract). *Clin Res* 1970;18:176.
12. Stockman JA: Hematologic manifestations of systemic diseases, in Nathan DG, Oski FA (eds): *Hematology of Infancy and Childhood*, ed 3, Philadelphia, WB Saunders, 1987, pp 1632-1675.
13. Monzon CM, Taylor HM: Laboratory tests to evaluate hereditary red cell disorders. *Postgrad Med J* 1987;81:293-300.
14. Ivey HH, Sabio H: Multiple exchange transfusions in the treatment of a newborn with pyruvate kinase deficiency. *Clin Pediatr* 1979;18:756-758.
15. Sullivan DW, Glader BE: Erythrocyte enzyme disorders in children. *Pediatr Clin North Am* 1980;27:449-462.
16. Brown BA: Special hematology procedures, in Brown BA: *Hematology: Principles and Procedures*, Philadelphia, Lea and Febiger, 1988, pp 150-152.
17. Anderson MJ: Human paravovirus infections. *J Virol Methods* 1987;17:175-181.

The Authors

TIMOTHY A. O'CONNOR, M.D.
CARLOS M. MONZON, M.D.
FRANK I. CLARK, M.D.

The authors are from the Department of Child Health at the University of Missouri-Columbia School of Medicine.

Reprints

Carlos M. Monzon, M.D.
Department of Child Health
University of Missouri-Columbia
School of Medicine
1 Hospital Drive
Columbia, Missouri 65212

Survey of Cancer Control Attitudes Among Missouri State Legislators

James R. Davis, M.S., Thomas G. Kern, M.S., Michael C. Perry, M.D., and Ross C. Brownson, Ph.D.
Columbia, Missouri

and Robert G. Harmon, M.D., M.P.H.
Jefferson City, Missouri

A number of cancer control efforts, while proven to be effective, require significant support from state and local lawmakers in order to be successful. This survey of state legislators' attitudes toward health risks and risk reduction measures that could be undertaken shows a favorable outlook for cancer control programs in Missouri

Cancer is currently the second leading cause of death in Missouri, causing nearly 11,100 deaths during 1987.[1] A significant portion of cancer deaths are preventable, and it is estimated that tobacco use, the most readily preventable cause of cancer, contributes to 30% of all cancer deaths.[2] Innovative and effective approaches to cancer control are available, but they require state and local support in order to be successful.

Legislation is a key component of state efforts to control cancer. Regulation, taxation, and program funding can each contribute in unique ways to cancer control. However, the formidable task of securing cancer control legislation requires a full understanding of policymakers' views on cancer control issues.

The Missouri Cancer Control Advisory Board, in cooperation with the Missouri Department of Health, surveyed Missouri state legislators as background for developing the legislative agenda of a state cancer control plan. The mail survey assessed legislators' attitudes toward cancer and other health issues, cancer risk reduction and other health improvement programs, and specific cancer control legislative items. The survey results were used to determine the appropriate focus and scope of proposed state cancer control programs and to identify legislative items with potentially strong support from the Missouri state legislature. The survey process was also used to increase legislators' awareness of cancer control issues.

Methods

Attitudes toward cancer and other health issues were assessed by asking legislators to rank the five most important health issues in Missouri from a list of 10 health issues (Table 1). Legislators were not asked to rank all 10 items because a forced low ranking of items might have prevented legislators from returning the survey, for fear of offending an important constituency. The 10 health issues were selected from a longer list on the basis of Missouri mortality statistics and past legislative concerns. Legislators' attitudes toward the health issues were quantified by assigning five points to the top ranked issue, four points to the second ranked issue, and so on, and then dividing the score by the number of legislators to obtain the average ranking, as indicated in Table 1.

Legislators' attitudes toward cancer risk reduction programs in relation to other health improvement

Table 1
Legislator Ranking of the Most Important Health Issues in Missouri

Health Issue	House Dem	House Rep	Senate Dem	Senate Rep	All
Cancer	3.92	3.82	3.20	3.57	3.94
AIDS	2.92	3.09	3.20	3.57	3.04
Heart Disease/ Stroke	2.83	2.91	2.00	4.00	2.90
Birth Defects	0.96	1.18	1.00	0.71	1.00
Infant Mortality	0.98	0.77	1.80	0.57	0.94
Chronic Lung Disease	0.88	0.59	0.40	2.14	0.88
Diabetes	0.92	0.64	1.20	0.14	0.79
Accidents	0.63	0.59	2.20	1.29	0.76
Homicide/ Suicide	0.60	0.55	0.00	0.00	0.50
Infectious Disease	0.38	0.86	0.00	0.00	0.45

Average Ranking *

*Average rankings were obtained by assigning five points to the top ranked issue, four points to the second ranked issue, etc., for each legislator, then dividing the total score by the number of legislators responding to the question.

Table 2
Legislator Ranking of the Most Important Programs for Protecting or Improving the Health of Missouri Residents

Program	House Dem	House Rep	Senate Dem	Senate Rep	All
Sexually Transmitted Diseases	3.08	3.79	2.20	3.14	3.20
Drug Abuse	2.13	3.47	2.80	1.86	2.47
Prenatal Care	2.21	2.16	2.40	2.00	2.19
Drinking and Driving	1.31	1.47	2.40	1.14	1.41
Tobacco Prevention/ Cessation	1.38	0.63	1.60	2.29	1.29
Rural Health Care	1.35	1.21	1.40	1.00	1.29
Air/WaterPollution Control	1.13	2.21	1.00	1.57	1.18
Insurance Coverage	1.67	0.37	0.60	0.00	1.14
Occupational Hazards	0.44	0.47	0.00	1.29	0.49
Seat Belt Use	0.31	0.21	0.60	0.71	0.34

Average Ranking*

*Average rankings were obtained by assigning five points to the top ranked program, four points to the second ranked program, etc., for each legislator, and then dividing the total score by the number of legislators responding to the question.

programs were assessed by asking legislators to rank the five most important state programs for protecting or improving the health of Missouri residents. The 10 options given (Table 2) were selected from a longer list of issues. Selection of the 10 was based on the estimated contribution of risk factors to disease and past legislative concerns in Missouri. Attitudes toward programs were quantified by a method similar to that used for health issue rankings.

The survey also assessed legislator support for specific legislative items. Support was assessed by asking the legislators if they would support the item. They were given the choice of "Yes," "Maybe," or "No" for each of the 12 items shown in Table 3. The 12 legislative items were selected from a longer list compiled from published reviews of state and federal legislation.[3-5] The final selection of items was based on priority risk factors and risk populations identified by the Missouri Cancer Control Advisory Board.

Support for each item was quantified by assigning a plus-one for each "Yes," a zero for each "Maybe," and a minus-one for each "No," and then dividing the total by the number of legislators to obtain the average score.

Development of the final survey questionnaire included input from the one state senator and one state representative who are members of the Advisory Board. Their input was invaluable in focusing the overall questionnaire, identifying the appropriate content and format of individual questions, and designing response options that were acceptable to legislators. The legislators on the Advisory Board also supported the survey through cover letters attached to the survey questionnaires.

To increase the response rate, the survey was limited to two pages, and legislators were given the option of responding anonymously.

Results

The overall return rate for the mailed survey was 48% (94 of 197 state legislators). The return rate in the House of Representatives was 50% (82 of 163 representatives). A much lower response was obtained from senators, with only 12 out of 34 (35%) returning the survey.

Legislators' ranking of diseases showed three distinct clusters (Table 1). Cancer, AIDS, and heart disease/ stroke were ranked first, second and third, respectively. Response to risk reduction programs also clus-

Table 3
Legislator Support of Potential Legislative Items

Legislative Item	House Dem	House Rep	Senate Dem	Senate Rep	All
	Average Rating*				
Clean Indoor Air Act	+.56	+.14	+.80	+.40	+.45
Funding for Local Health Department Cancer Prevention Programs	+.63	-.05	+.40	.00	+.40
Funding for a Missouri Cancer Control Research Consortium	+.47	+.05	+.80	-.40	+.39
Funding for Cancer Screening Programs	+.51	+.14	+.60	+.40	+.39
State Tax on Smokeless Tobacco	+.35	+.32	+.40	+.40	+.34
Funding for Public School Cancer Prevention Programs	+.40	-.05	+.60	+.40	+.30
Required Mammography Coverage by Private Insurance Companies	+.36	-.18	+.80	+.60	+.26
Funding for Occupational Disease Prevention Programs	+.27	-.17	+.40	+.60	+.18
Increased State Tax on Cigarettes	+.16	+.04	+.60	.00	+.14
Funding for Minority Cancer Prevention Program	+.30	-.40	+.60	.00	+.11
Funding to Support Community Cancer Prevention Coalitions	+.28	-.43	+.60	-.20	+.09
Funding for Tobacco Use Prevention/Cessation Programs	+.12	-.17	+.40	-.40	.00

* Average support ratings for each legislative item were obtained by assigning a plus-one for each "Yes," a zero for each "Maybe," and a minus-one for each "No," for each legislator, and then dividing by the number of legislators indicating their level of support for that item.

tered in three groups (Table 2). The programs judged to be the most important for protecting or improving the health of Missouri residents were prevention of sexually transmitted diseases, prevention of drug abuse, and prenatal care. Out of 10 items, tobacco use prevention and cessation, and occupational hazard reduction ranked fifth and ninth, respectively. The Clean Indoor Air Act received the strongest support among legislative items (Table 3). Funding for occupational disease prevention programs was ranked eighth out of 12 items, and funding for tobacco use prevention and cessation programs was ranked last.

Discussion

The most striking result of the survey is the discrepancy between the legislators' recognition of cancer as the most important health problem in Missouri and their failure to strongly support key risk reduction programs directly addressing tobacco use and occupational exposure. Responses to potential legislative items (all related to cancer) also indicated that legislators are more likely to support cancer programs that are tied to traditional funding recipients (i.e., local health departments, research centers, and schools) than they are to support programs addressing specific risk factors or high risk populations (e.g., tobacco use or minorities). These results suggest a practical need for public health agencies to promote comprehensive cancer control programs rather than targeted risk reduction programs.

The legislators' preference for a comprehensive approach to programs did not apply to selected regulatory and tax issues. The Clean Indoor Act received the strongest support of any legislative item, and a tax on smokeless tobacco ranked fifth out of the 12 items. Unlike the other legislative items, both issues have been brought before the state legislature during the past several years, and this may explain their relatively high level of support.

While we recognize the possibility of bias due to the relatively low response rate to the survey, we believe that this type of survey is a useful tool for developing and refining legislation for cancer control and other health issues. Our survey has demonstrated legislators' attitudes toward cancer and its risk factors and potential legislative solutions. Legislators' recognition of the importance of cancer and the relatively high positive response to repeated regulatory and tax issues indicates an optimistic future for cancer control legislation in Missouri.

References

1. Missouri Department of Health: *Missouri Vital Statistics*. Jefferson City, Mo, State Center for Health Statistics, Missouri Department of Health, 1987.
2. National Cancer Institute: *Cancer Control Objectives for the Nation: 1985-2000*. National Cancer Institute Monograph, NIH Publication No 86-2880, 1986.
3. United States Department of Health and Human Services, Public Health Service, National Institutes of Health: *State Legislated Actions Affecting Cancer Prevention: A Fifty-State Profile*. NIH Publication No 87-2686, December 1986.
4. United States DHHS, PHS, NIH: *State Legislated Actions Affecting Cancer Prevention: A Fifty-State Profile*. NIH Publication No 84-2686, September 1984.
5. United States Department of Health and Human Services, Public Health Service, Centers for Disease Control: *Smoking and Health: A National Status Report*. DHHS Publication No (CDC) 87-8396, 1987.

The Authors
JAMES R. DAVIS, M.S.
THOMAS G. KERN, M.S.
MICHAEL C. PERRY, M.D.
ROSS C. BROWNSON, PH.D.
ROBERT G. HARMON, M.D., M.P.H.

The authors are from the Bureau of Cancer Epidemiology and Control, Missouri Department of Health (Messrs. Davis and Kern, Dr. Brownson), the University of Missouri-Columbia (Mr. Kern), the UMC School of Medicine (Dr. Perry), the Missouri Department of Health (Dr. Harmon), and the Missouri Cancer Control Advisory Board (Drs. Perry, Harmon, Brownson).

The authors acknowledge the assistance of Missouri State Senator Roger Wilson and Representative Carol Roper Park in designing and implementing the survey.

This research was supported in part by National Cancer Institute grant CA 43463.

Reprints
James R. Davis, M.S.
Bureau of Cancer Epidemiology and Control
Missouri Department of Health
201 Business Loop 70 West
Columbia, Missouri 65203

Survey of Missouri State Senators

NAME (optional)

1) Please select from the following list the five most important health issues in Missouri. Place each of the numbers "1" through "5" next to the appropriate issues with number "1" indicating the most important issue.

Birth Defects
Chronic Lung Disease (emphysema, bronchitis, asthma)
Infant Mortality
AIDS
Cancer
Diabetes
Heart Disease and Stroke
Infectious Disease (influenza and others)
Accidents (traffic and other)
Homicide and Suicide

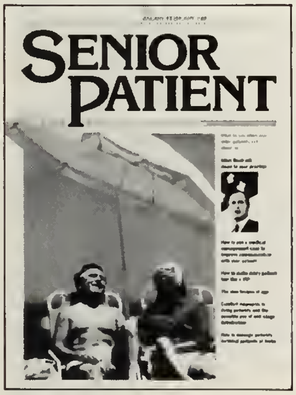
2) Please select from the following list the five most important programs that will contribute to protecting or improving the health of Missouri residents. Place each of the numbers "1" through "5" next to the appropriate programs with number "1" indicating the most important program.

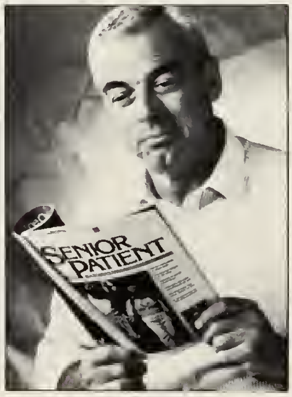
Programs to Provide Prenatal Care
Programs to Increase Insurance Coverage
Programs to Increase Seat Belt Use
Programs for Tobacco Use Prevention and Cessation
Programs to Prevent Sexually Transmitted Diseases (including AIDS)
Programs to Prevent Drug Abuse
Programs to Control Air and Water Pollution
Programs to Improve Access to Rural Health Care
Programs to Prevent Drinking and Driving
Programs to Reduce Occupational Hazards

3) Listed below are twelve cancer prevention related legislative items that have been passed or considered by other state legislatures. Inclusion of an item in this list does not indicate that it will be proposed in Missouri, however, we would like to assess your position on a range of cancer prevention legislative issues. Please indicate your level of support for the following items by circling "YES", "MAYBE" or "NO".

a) Restrictions on tobacco smoking in public areas.(Clean Indoor Air Act).
b)Required coverage of breast cancer screening (mammography) by private insurance companies.
c) Increased state tax on cigarettes.
d) State tax on smokeless tobacco.
e) Funding for minority cancer prevention programs.
f) Funding for public school cancer prevention programs.
g) Funding for local health department cancer prevention programs.
h) Funding for tobacco use prevention and cessation programs.
i) Funding for cancer screening programs (e.g. PAP smears, mammography and others).
j) Funding for an occupational disease monitoring and prevention program.
k) Funding to support the formation of local community cancer prevention coalitions.
l) Funding for a Missouri Cancer Control Research Consortia (sic) involving the University of Missouri, Ellis Fischel State Cancer Center, the Cancer Research Center and the Missouri Department of Health.

Where do you go when you need to know more about your senior patients?



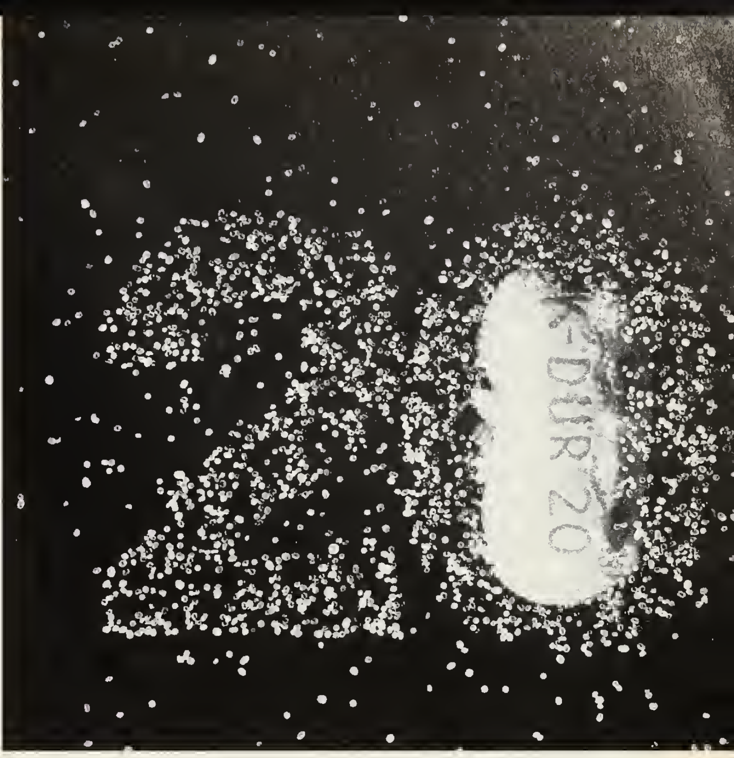


We'll take good care of you.

Coming in the next issue:

- Alzheimer's disease: What do we know now?
- What to do for congestive heart failure
- Do senior patients need to stop smoking?
- How lab values for older patients vary from normal

Read Every Issue from Cover to Cover!



Most patients need only one.

K-DUR™ 20 | Microburst Release System™
(potassium chloride) 20 mEq Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System®
(potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g , spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3 Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

1002004

13944326
Rev. 4/87

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

Professional help for health professionals.

Substance abuse is a growing problem among health professionals. At Timberlawn Psychiatric Hospital, a special program exists to help health professionals overcome substance abuse problems.

A range of treatment options, individual and group therapy programs, and other recovery-oriented services are all geared toward the unique needs of the health professional. An individualized evaluation leads to selection of the most appropriate treatment program, which is further enhanced by specialized aftercare and monitoring services. Treatment team members include Board Certified psychiatrists, clinical psychologists, psychiatric social workers and substance abuse counselor specialists with certification in their field.

At Timberlawn, we understand the unique challenges faced by health professionals today, and we're here to help. For more details on our facility or referral arrangements, contact: Dr. Edgar P. Nace, Chief of Substance Abuse Services.

TIMBERLAWN
PSYCHIATRIC HOSPITAL
PROFESSIONALS HELPING PROFESSIONALS

4600 Samuell Blvd. • P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958 • 1-800-426-4944

New Members

☐ **Sarah A. Aydt, M.D.**, #14 Doctor's Park, Cape Girardeau 63108, has become a member of the Cape Girardeau County Medical Society. Dr. Aydt received her preliminary education at Murray State University and obtained her medical degree at SIU School of Medicine in 1984. She completed her residency at Memorial Medical Center, St. John's Hospital, Springfield, IL. Dr. Aydt specializes in internal medicine/pediatrics.

☐ **Jackie S. Beene, M.D.**, 1206 MacArthur Drive, Webb City 64870, has become a member of the Jasper County Medical Society. Dr. Beene received his preliminary education at Southern Arkansas University and obtained his medical degree at the University of Arkansas Medical School in 1985. He completed his residency at AHEC-Fort Smith, Fort Smith, AR. Dr. Beene specializes in family practice.

☐ **Peter Y. Chu, M.D.**, 1010 Carondelet Drive, Suite 320, Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. He received his preliminary education at Washington University and obtained his medical degree at St. Louis University in 1983. He completed his residency at Truman Medical Center, Kansas City, MO. Dr. Chu specializes in general surgery.

☐ **Arthur S. Daus, M.D.**, 2902B McClelland Blvd., Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Daus received his preliminary education at Vanderbilt University and obtained his medical degree at St. Louis University in 1981. He completed his residency at the University of Kentucky Medical Center, Lexington, KY. Dr. Daus specializes in neurological surgery.

☐ **Thomas H. Good, M.D.**, Medical Plaza 11-20, 4320 Wornall Road, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Good received his preliminary education at Purdue University and obtained his medical degree at Indiana University in 1978. He completed his residency at at Ball Memorial Hospital, Muncie, IN. Dr. Good specializes in cardiovascular disease.

☐ **William M. Grant, M.D.**, UMC Hospital and Clinics, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Grant received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri School of Medicine in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Grant specializes in obstetrics/gynecology.

☐ **Kenneth M. Jacob, M.D.**, 6724 Troost, Suite 900, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Jacob received his preliminary education and his medical degree at the University of Missouri-Kansas City in 1982. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Jacob specializes in diagnostic radiology.

☐ **Michael T. Jedlinski, M.D.**, #14 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Jedlinski received his preliminary education at the University of Illinois and obtained his medical degree at the SIU School of Medicine in 1984. He completed his residency at Memorial Medical Center, St. John's Hospital, Springfield, IL. Dr. Jedlinski specializes in internal medicine.

☐ **Walter R. Peters, M.D.**, 3401 Berrywood, Suite 104, Columbia 65201, has become a member of the Boone County Medical Society. Dr. Peters received his preliminary education at Western Illinois University and obtained his medical degree at the Washington University School of Medicine in 1982. He completed his residency at Jewish Hospital, St. Louis, MO. Dr. Peters specializes in general surgery.

☐ **John L. Putnam, M.D.**, 2700 McClelland Blvd., Joplin 64803, has become a member of the Jasper County Medical Society. Dr. Putnam received his preliminary education at Andrews University and obtained his medical degree at the University of Oklahoma College of Medicine in 1983. He completed his residency at the Univrsity of Oklahoma Health Sciences Center, Oklahoma City, OK. Dr. Putnam specializes in orthopaedic surgery.

☐ **Bruce D. Smith, M.D.**, 1335 Village Drive, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Smith received his preliminary education at the University of Alberta and obtained his medical degree at the University of Alberta in 1977. He completed his residency at the University of Alberta Hospitals, Alberta, Canada. Dr. Smith specializes in orthopaedic surgery.

☐ **Phillip D. Tedrick, D.O.**, St. Francis Medical Center, 211 St. Francis Drive, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Tedrick received his preliminary education at Southern Illinois University and obtained his osteopathic degree at the College of Osteopathic Medicine and Surgery-Des Moines in 1977. He completed his residency at Sun Coast Hospital, Large, FL. Dr. Tedrick specializes in emergency medicine.

☐ **Paul D. Thompson, M.D.**, #3 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Thompson received his preliminary education and his medical degree at the University of Missouri-Kansas City in 1981. He completed his residency at the University of Louisville, Louisville, KY. Dr. Thompson specializes in urology.

☐ **James J. Webb, D.O.**, 2902B McClelland, Suite 10, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Webb received his preliminary education at the University of Mississippi and obtained his osteopathic degree at the University of Health Sciences College of Osteopathic Medicine in 1982. He completed his residency at Mt. Clemens General Hospital, Mt. Clemens, MI. Dr. Webb specializes in anesthesiology.

☐ **John A. Yuhas, M.D.,** 2401 Jackson, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Yuhas received his preliminary education and his medical degree at the University of Missouri-Kansas City in 1984. He completed his residency at the University of Missouri-Kansas City, Kansas City, MO. Dr. Yuhas specializes in ophthalmology.

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
3609 NE 62nd Terrace
Kansas City, MO 64119
816-455-3400

Amount of insurance $ ____________________

Date of Birth ____________________

Smoker/Non-Smoker (circle one)

Name ____________________

Address ____________________

City/State ____________________

Zip ______________ Phone ______________

Medical School News

The University of Missouri-Columbia

- Sheldon R. Braun, M.D., associate professor of pulmonary medicine, in November presented a paper titled "Malnutrition and Respiratory Failure" at the Critical Care Symposium in Paris.

- **Thomas Burns, M.D.**, professor and chief of the division of endocrinology within the department of medicine, was named the first Stafford Distinguished Professor of Medicine-Endocrinology at a reception December 14. Stan and Lois Stafford of Columbia, who have a lifelong interest in diabetes and were original members of the Columbia chapter of the Cosmopolitan International Breakfast Club, established the endowed professorship for use in the University's Cosmopolitan International Diabetes Center. Dr. Burns is director of the center.

- **G.W.N. Eggers, Jr., M.D.**, professor and chairman of anesthesiology, was elected to a third term as vice president for scientific affairs for the American Society of Anesthesiologists at the group's annual meeting in October in San Francisco. Dr. Eggers also was installed December 6 as president of the Boone County Medical Society for 1989.

- **Robert G. Frank, Ph.D.**, associate professor of physical medicine and rehabilitation, has been awarded $10,000 for fiscal year 1988-89 from UpJohn Pharmaceutical Co., to serve as principal investigator on a drug study titled "The Effect of Alprazolam on Rheumatoid Arthritis Disease Activity, Pain and Mood.

- **David Goldstein, M.D.**, associate professor of child health and associate director of the University's Cosmopolitan International Diabetes Center, is serving as interim chairman of the department of child health. He replaced **Gulior Barbero, M.D.**, who stepped down as chairman December 31. Dr. Barbero, a professor with specific interests in gastrointestinal disorders and cystic fibrosis, will continue in the department in an active teaching and research role. He also will continue working with patients in his extensive clinical service. Dr. Barbero had been chairman since 1973.

- **James L. Hedlund, Ph.D.**, professor of psychiatry and director of the Missouri Institute of Psychiatry, in October presented the keynote address, "Current Status of Mental Health Computing in the United States," at the Conference of the Computers in Psychiatry Special Interest Group, Royal College of Psychiatry, at the University of Keele, England. Also in October, Dr. Hedlund gave the keynote address, "Current Status of Mental Health Computing: Implications for Psychiatry into the 1990s," at the Conference on Psychiatry into the 1990s in Glasgow, Scotland.

- **S. Arshad Husain, M.D.**, professor and chief of child and adolescent psychiatry, in December presented two papers at the fourth International Meeting of the Pacific Rim College of Psychiatrists in Hong Kong. He spoke on cross-cultural aspects of child rearing and attention deficit disorder.

- **Karl Nolph, M.D.**, professor and chief of the division of nephrology, was an invited speaker at two international gatherings in October. Dr. Nolph gave "An Overview of New Developments in Peritoneal Dialysis" at the Hospital L. Pasteur, Hospices Civils de Colmar, France. He also spoke on "Lymphatic Absorption in Peritoneal Dialysis" at the International Symposium on New Perspectives in Hemodialysis, Peritoneal Dialysis, Arteriovenous Hemofiltration and Plasmapheresis at the Klinikum der Albert-Ludwigs-Universitaet in Freiburg, West Germany.

- **Jerry Parker, Ph.D.**, clinical associate professor of medicine and psychiatry, and **Susan Buckelew, Ph.D.**, assistant professor of physical medicine and rehabilitation have contributed a chapter, "Pain in Arthritis," to the book Coping with Arthritis published by Charles C. Thomas.

- **Jayendra H. Shah, M.D.**, professor of endocrinology and metabolism and chief of medical service at Truman Veterans Hospital, in November presented a paper titled "Sex Differences in Insulin Release Induced by Meritene and Amino Acids" at the 13th International Diabetes Federation Congress in Sydney, Australia. Also last year, Dr. Shah presented a paper titled "The Effect of Ethanol on Glucose and Insulin Metabolism in Healthy Subjects" at the eighth International Congress of Endocrinology in Kyoto, Japan.

- **Zbylut Twardoswski, M.D.**, professor of nephrology, gave several presentations on peritoneal dialysis during a trip to Japan in October. He discussed "New Advances in Automated Peritoneal Dialysis," "Tidal Peritoneal Dialysis" and the "Swan Neck Peritoneal Dialysis Catheter" at PD seminars in Sendai Omiya, Kanazawa, Ishikawa, Toyama and Hiroshima. Dr. Twardowski also was invited by the following experts to discuss "Peritoneal Access -- History and Current Advances": Professor Kazuo Ota, director of the Kidney Center at Tokyo Women's Medical College; Dr. Yoshihei Hirasaw, vice president of Shinrakuen Hospital in Niigata; Professor Akira Shinoda, director of the nephrology division at Kanazawa Medical University in Kanazawa, Ishihkawa; Professor Hiroshi Kida at the School of Medicine at Kanazawa University; and Dr. Dairoku Shirai, director of the nephrology division of Osaka Koseinenkin Hospital in Osaka.

- **James M.A. Weiss, M.D.**, professor and chairman of psychiatry, was one of two U.S. psychiatrists invited to participate as a plenary lecturer at the scientific convocation December 9 celebrating the 25th anniversary of the Chinese University of Hong Kong. Dr. Weiss spoke on "Psychiatry in Medical Education: The Question of Bias." In addition, Dr. Weiss was an invited speaker at the fourth International Meeting of the Pacific Rim College of Psychiatrists, held in Hong Kong the preceding week. He reported on the long-term research project related to psychopathy and alcoholism headed by himself and Niels C. Beck, Ph.D., associate professor of psychiatry.

• Three members of the division of nephrology, **Karl Nolph, M.D.**, professor and division chief; **Ramesh Khanna, M.D.**, associate professor; and **Zbylut Twardowski, M.D.**, professor, participated in September in a poster presentation of a cross sectional malnutrition study at the fifth International Congress on Nutrition and Metabolism in Renal Disease in Strasbourg, France.

The three physicians, plus **Walter K. Nichols, M.D.**, associate professor of surgery, in December presented "Swan Neck Peritoneal Dialysis Catheters — Design, Insertion, Break-in and Chronic Care" at the sixth Benelux CAPD Symposium, RAI Congrescentrum, Amsterdam. Dr. Twardoswski also presented "Patient Tailored Peritoneal Dialysis for Adequate Treatment."

• The following members of the division of cardiology within the department of medicine were invited to give presentations at the American Heart Association Meeting in November in Washington, D.C.: **Martin A. Alpert, M.D.**, associate professor; **Greg C. Flaker, M.D.**, associate professor; and **Daniel Villarreal, M.D.**, assistant professor.

• The Commission on Accreditation of Rehabilitation Facilities has notified the University that the Howard A. Rusk Rehabilitation Center has met high standards of performance and has been accredited through May 1991. CARF Executive Director Alan H. Toppel, in notifying Rusk officials of their award, said, "This important achievement on your part is a further indication of your dedication and commitment to improve the quality of the lives of people with disabilities."

• The following members of the department of physical medicine and rehabilitation participated in the seventh annual National Head Injury Foundation Symposium in Atlanta in November: **Marc W. Haut, Ph.D.**, postdoctoral fellow; **Robert G. Frank, Ph.D.**, associate professor; **Dawn E. Mosher, B.S.**, research assistant; and **Allyson E. Haut, M.A.**, graduate research coordinator. Also participating in this symposium were **Kathleen E. Cain**, clinical instructor of neurosurgery; **Clark C. Watts, M.D.**, professor of surgery; and **Megan Smick, M.A.**, primary therapist, Adult Day Treatment, Mid-Missouri Mental Health Center.

• The U.S. Department of Education, Office of Special Education and Rehabilitative Services, has notified **Paul Kaplan, M.D.**, professor and chairman of the department of physical medicine and rehabilitation, that his department's Long Term Training Grant in Rehabilitation Medicine has been renewed for 1988-89. With the grant, the department is working to address the shortage of physicians trained in the field of physical medicine and rehabilitation, while teaching physicians in other fields the value of PM&R to their patients. PM&R research projects also are funded.

University of Missouri-Kansas City

• Several hundred people attended a December 9 program and celebration for **E. Grey Dimond, M.D.**, founder and provost emeritus of the Medical School. The event commemorated Dr. Dimond's twentieth anniversary with the University and his seventieth birthday. Among the highlights of the program was the presentation of the first annual **E. Grey Dimond, M.D., Take Wing Award** which, each year, will honor a graduate for his or her accomplishments. The first award went to **David Hayes, M.D., '76**. The award, said master of ceremonies **Dean James J. Mongan, M.D.**, "honors the founder of this school by giving annual recognition to the ingredient Dr. Dimond believes to be the most valuable and fundamental aspect of this school, the student. . .(that) it is the flights of these fledglings that show how this institution has served its vision." Dr. Hayes served his internship and residency in cardiovascular disease at Mayo Graduate School of Medicine. He went on to be a fellow in nuclear cardiology at Cornell University, had a traveling fellowship in France, and now is a consultant in cardiovascular disease and director of the pacemaker division at the Mayo Clinc.

• UMKC faculty members and administration assumed an active role at the annual meeting of the Association of American Medical Colleges (AAMC) Nov. 13-16 in Chicago through their participation in poster presentations and leadership in seminars. Among the poster session authors were **Julia Duckwall, Ph.D.**, **Katherine Smith, M.D.**, and **Louis Arnold, Ph.D.**, who co-authored "Selecting High School Seniors for Alternative Programs in Medical Education." Other poster sessions included "The Challenge Exam: Testing Knowledge in Specific Content Areas" and "Correlates of Student Performance on Part 1 NBME." Co-authors on the Challenge Exam poster session were **Lee Willoughby**, **Marline Gerrity**, and **Mona Neaderhiser.** Co-authors on the NBME correlates poster session were **Robert Blanc, Ph.D.**, **Deanna Martin, Ph.D.**, and **Martin Jolley, M.A.** In addition, Louise Arnold, Ph.D., director of the Office of Medical Education and Research, was involved in two panel presentations concerning combined-degree programs. About 70 people attended a session on "Baccalaureate/M.D. Degree Programs," of which Dr. Arnold was moderator and organizer. Dr. Arnold was also organizer for "A Natural History of an Innovation in Medical Education: The Case of Baccalaureate-M.D. Degree Programs." **Reaner Shannon, Ph.D.**, associate professor, participated in UMKC's presentation booth at two Minority Student Medical Career Awareness Workshops. Also involved in leading a program was **Marjorie Sirridge, M.D.**, Assistant Dean for Curriculum. She chaired a group on "Mentoring Women in Medicine."

• The first of four groups sponsored by the National Fund for Medical Education (NFME) visited the School of Medicine in December to learn about the selection process and the Quarterly Profile Examinations. Five educators from Oral Roberts University gained an in-depth view of the selection process and student services in the program, which is one of five the NFME selected nationally for medical educators to visit. Future visits are scheduled from the University of Washington, Seattle, Albany Medical College, Albany, N.Y. in February, and from the University of California-Davis, in April.

- **Fong Y. Tsai, M.D.**, professor and chairman of the department of radiology travelled to China and Japan on a Far East lecture tour this fall, making more than 10 presentations on a variety of medical topics. He spoke to groups at the Kobe Meeting of the Japan Neurosurgical Society, the Cardiovascular Institute and Fu-Wai Hospital in Beijing, China, and the Renji Hospital in Shanghai, China, and at the Beijing Neurosurgical Institute and Guangxi Medical School in Nanning, China.

- **Frederick J. McCoy**, clinical professor of plastic surgery, recently was presented with the Special Achievement Award at the opening ceremony of the American Society of Plastic and Reconstructive Surgeons in Toronto before 6,000 people. The Special Achievement Award is the society's highest honor, recognizing outstanding achievements by a selected plastic and reconstructive surgeon. Dr. McCoy was recognized for his surgical skill, leadership, international reputation, teaching and research, and community involvement.

- **Bernard Lubin, Ph.D.**, professor of psychology and medicine, recently was named a Curators' Professor by the University of Missouri Board of Curators. The honor goes to outstanding scholars with established reputations in their professions. Dr. Lubin is internationally known for his research on the measurement of mood and affect, and his research facilitating the study of normal and clinical aspects of these phenomena. His work in the areas of small-group process and group psychotherapy is equally well-known.

- Missouri Governor John Ashcroft recently appointed clincal assistant professor **Michael L. Weaver, M.D.**, as chairman of the State Advisory Council on Emergency Medical Services, an appointment which he will hold until 1992. The purpose of the Council is to make recommendations to the governor and state legislature on policies, plans, procedures, and proposed regulations on how to improve statewide trauma centers, air ambulance care, and the prehospital emergency medical service system. Dr. Weaver, a 1977 graduate of UMKC School of Medicine, is director of Emergency Services at St. Luke's Hospital of Kansas City.

- **Joseph C. Parker, Jr., M.D.**, professor and chairman of the department of pathology, recently made several professional presentations. He spoke on "Neural Features of Lyme Disease (Neuroborreliosis)" as well as "Cerebral Gliosaroma with Mesenchymal Chondrosarcoma" at a November meeting of the Southern Medical Association in New Orleans. In addition, he gave a presentation in December on "What Surgeons Should Know About Alzheimer's Disease" at the Kansas City Surgical Symposium.

- **Sandra K. Ediger, D.O.** docent and instructor of medicine, made a case presentation on "Tale Granulomatosis Masquerading as Eosinophilic Pneumonia" at an Affiliates Forum of the American College of Chest Physicians in October 1988.

- **John Bennett, M.D.**, assistant professor of emergency medicine, recently was presented with a Chancellor's Teaching Enhancement Award by the University of Missouri-Kansas City. The award will allow Dr. Bennett to develop a 10-lecture series on community health and preventive medicine.

- **Joseph F. Waeckerle, M.D.**, clinical professor of emergency medicine, was named editor of the Annals of Emergency Medicine, effective January 1, 1989. Dr. Waeckerle has more than 15 years of services to the journal, ACEP, and several other emergency medicine-related organizations, including the Emergency Medicine Residents' Association, which he founded in 1974.

- **Milton B. Ozar, M.D.**, clinical professor, recently was named president of the South Central section of the American Urological Association.

Washington University

- **Carolyn Baum** has been appointed as the Elias Michael Director of the Program in Occupational Therapy at Washington University School of Medicine in St. Louis. Baum will be planning and directing undergraduate and graduate programs in occupational therapy. She also serves as an instructor. Baum will continue as director of occupational therapy clincal services at the School of Medicine's Irene Walter Johnson Institute of Rehabilitation, a position she has held since she joined the faculty in 1976. Baum is pursuing a doctorate in gerontology and social policy at the University's George Warren Brown School of Social Work.

- Audiologists at the School of Medicine are asking anyone who has worn an in-the-ear hearing aid for at least three months, either successfully or unsuccessfully, to volunteer for a study. Researchers are trying to determine the most appropriate amount of amplification needed to compensate for hearing loss. The study will be led by **Michael Valente, Ph.D.**, assistant professor of otolaryngology and director of the adult audiology program. According to Valente, several methods or formulas are now used to measure the amount of volume amplification needed by hearing-impaired individuals. Because hearing aid manufacturers use various modifications of these formulas when they receive prescriptions from audiologists, it is possible for the same prescription to be interpreted in different ways by different manufacturers.

- Healthy volunteers are needed for a study of how aging affects memory. The five-year study, conducted by the Memory and Aging Project at the School of Medicine will compare how memory is affected over time in those who are aging normally and in those with Alzheimer's Disease.

Researchers are calling for people from 55 to 62 years old who do not have Alzheimer's Disease or serious memory loss. Volunteers must have had at least seven years of education and may have had some college education. Those participating in the study will undergo a half day of testing per year, consisting of an interview with a physician and a battery of non-invasive memory tests.

The Memory and Aging Project, a long-term study of intellectual function in people aged 65 and older, is directed by **Leonard Berg, M.D.**, professor of clinical neurology at the School of Medicine. Berg is also director of Washington University's Alzheimer Disease Research Center (ADRC). For more information, call the Memory and Aging Project at 314/362-2683.

• **Martin D. Jendrisak, M.D.**, assistant professor of surgery at the School of Medicine, has been awarded a grant for organ transplantation research from the National Institutes of Health (NIH).

Jendrisak, who joined the faculty at the School of Medicine in 1985 as an instructor in surgery, will use the five-year grant, which totals more than $330,000, to study kidney transplantation rejection. His work will focus on trying to better understand how the body's immune system, which is responsible for rejection, is affected by the various biologically active molecules produced during fatty acid metabolism.

• **Albert Roos, M.D.**, professor emeritus of anesthesiology and lecturer in cell biology and physiology at the School of Medicine, has received a grant from the NIH for his research on intracellular pH. Roos's five-year grant represents support of his work by the National Heart, Lung, and Blood Institute of the NIH for 43 consecutive years. He received his first grant in 1948. Roos came to Washington University in 1946 as a fellow in cardiology and switched to physiology and surgery the following year. He was named professor of anesthesiology in 1961 and professor of physiology and biophysics in 1967.

• **Philip Needleman, Ph.D.**, Alumni Professor and head of the Department of Pharmacology at the School of Medicine, was selected as a co-recipient of the 1988 Research Achievement Award of the American Heart Association. The award, the highest honor given by the association, was presented on November 14 in Washington, D.C.

Needleman is being honored in recognition of his original and important contributions to the identification and understanding of atrial natriuretic factor, a factor in the blood that regulates salt and fluid balances in the body.

•The Coleman/Fannie May Candies Foundation of Chicago has donated $7,500 to the Department of Microbiology and Immunology at the School of Medicine. The gift was used to support a departmental conference at which faculty, postdoctoral fellows and students to present their latest research.

There were 75 members of the department at the conference, which included 30 posters describing research activities of the department. An evening discussion on ethics in science was led by **Joseph Davie, M.D., Ph.D.**, past chairman of the department and now vice president for research at G.D. Searle & Co.

• **Dale Purves, M.D.**, professor of neurobiology at the School of Medicine, has been chosen as one of four neuroscientists who will participate in the 1988-89 Fidia Research Foundation Award Lecture Series.

The Fidia Research Foundation, established by an Italian pharmaceutical firm to promote neuroscience, presents these award lectures every two years. Each lecture is dedicated to a famous Italian neuroscientist. Purves will give the Camillo Golgi lecture, titled "Visualization of Synaptic Connections in Living Animals," on February 10 at Georgetown University Medical Center in Washington, D.C. Golgi won the Nobel Prize in 1906 for his work on the structure of the nervous system.

• The computerized library system developed at the School of Medicine has been installed at Pohang Institute of Sciences and Technology (POSTECH) in Korea.

The system, called BACS (Bibliographic Access and Control System), was developed by the School of Medicine library and has been in operation there since 1981. One of the first automated integrated control systems in the world, it has generated continuing interest both in the United States and the international library community.

POSTECH is the first university in Korea to install a completely integrated library system with the basic operations computerized. Conversion programs to operate the system using the Korean Hangul alphabet were written by **Simon Igielnik, Ph.D.**, director of medical computing facilities, and **Elizabeth Kelly**, associate director for library access services. They were responsible for installing the BACS system at POSTECH and had the system running within two days.

• **M. Wayne Flye, M.D., Ph.D.**, professor of surgery and immunology at the School of Medicine, has written and edited a book on organ transplantation that covers the various aspects of clinical transplantation for every organ system in the human body.

Flye's book, "Principles of Organ Transplantation," was published by W.B. Saunders. The book emphasizes the clinical application of recent technological and surgical improvements and advances in immunosuppression.

Flye came to Washington University in 1985 from the Yale University-New Haven Medical Center, where he was professor of surgery and director of the division of organ transplantation and immunobiology, as well as acting director of general surgery.

He received his medical degree from the University of North Carolina School of Medicine, and a Ph.D. in immunology from Duke University.

• Four leading U.S. medical schools have combined forces to create a progam for the education of physician-scientists in internal medicine.

In a joint effort to develop a new structure to permit selected medical students to pursue academic careers in internal medicine, the departments of internal medicine at Duke University, John Hopkins University, the University of Pennsylvania and Washington University are creating fully funded programs to provide comprehensive residency and fellowship training focusing on medical research.

Key features of the program include guaranteed six years of financial support for research and clinical training, guaranteed two years of residency training at one of the four schools, guaranteed two years of post-doctoral research training at one of the four schools, comprehensive program designed to provide a foundation for becoming a physician-scientist, and membership in a society of physician-scientists sponsored by the four schools.

Alfred P. Fishman, M.D., director of the Cardiovascular-Pulmonary Division at Penn Medical Center, is the national coordinator for the project. **John P. Atkinson, M.D.** was appointed as Washington University's program coordinator and principal mentor.

The first participants in the program, two from each of the four medical schools, were chosen in January. Students will be eligible to be chosen for the program in their third year of medical school. They will spend time at each of the four campuses, meeting with program mentors to determine at which school they will spend the next year engaged in research. Program coordinators will match a complete academic program with the students' investigative interests, allowing them to choose among the four schools for residency and post-doctoral research training as well.

- Experts in dentistry and radiology at the School of Medicine will collaborate on research using computerized imaging to detect gum disease much earlier than is now possible. The work is being supported by a $335,000 five-year grant from the National Institutes of Dental Research. Investigators are **Charles F. Hildebolt, D.D.S., Michael K. Shrout, D.M.D.,** and **Michael W. Vannier, M.D.**

- **Richard G. Stoker, Ph.D.,** has been selected as the new director at Central Institute for the Deaf (CID) at Washington University Medical Center in St. Louis.

Stoker is an associate professor of audiology at McGill University in Montreal. Stoker will be the first deaf director of the institution, which was founded in 1914 to teach deaf children to talk, to prepare teachers, clinicians and research scientists who deal with the deaf, and to pursue research beneficial to those with hearing disorders.

Stoker replaces **Donald R. Calvert, Ph.D.,** who has directed the institute for 16 years. His appointment was endorsed by **William H. Danforth, M.D.,** chancellor of Washington University. Stoker will also chair the Washington University Department of Speech and Hearing.

Stoker joined the faculty at McGill in 1986, coming from Pennsylvania State University, where he had been an assistant professor of audiology for five years. He has taught at Montreal Oral School for the Deaf and at the University of Alabama. He has also worked as a consultant to Bell Canada on the development of telephone devices for paraplegic and deaf customers.

Stoker received his doctorate from the School of Human Communication Disorders at McGill in 1980. He received his bachelor of science degree in speech pathology and audiology in 1972 and his master's degree in education of the deaf in 1973, both from the University of Utah. He received his master's degree in audiology from the University of Salfor, England, in 1977.

St. Louis University

- Two researchers from St. Louis University have made important scientific discoveries that may lead to major advancements in AIDS research and provide a promising new approach to drug therapy.

The research by **Maurice Green, Ph.D.,** professor and chairman of the Institute for Molecular Virology, and **Paul M. Loewenstein,** research assocate, St. Louis University School of Medicine, was published in the December 23 issue of Cell magazine.

Dr. Green

The paper describes functions of the tat gene product of HIV, the virus associated with AIDS. The AIDS virus is regulated by the tat gene, which is a protein made up of 86 amino acids. The function of the tat gene is essential for viral growth. If this gene is not functional, AIDS cannot replicate itself within a cell.

Dr. Loewenstein

The researchers have chemically synthesized the tat regulatory protein, which is biologically active, in a test tube. When this purified protein is added to the outside of the cell, it is taken up by the cell, which turns on (transactivates) the AIDS virus within the cell.

This is the first time any extra-cellular protein has been shown to be taken up by cells and to alter the regulation of gene expression within the cell. It is not yet known whether this process plays a role in HIV infection, but it could potentially be involved in turning on HIV in cells carrying latent virus.

Dr. Green earned his doctorate in biochemistry and chemistry from the University of Wisconsin in 1954. He joined St. Louis University School of Medicine in 1956 and became director of the Institute for Molecular Virology when it was established in 1964. Loewenstein earned a bachelor of science in bacteriology from Drake University in 1970. He has held positions at the Institute for Molecular Virology since 1971.

- **Douglas J. McDonald, M.D.,** assistant professor of orthopedics at St. Louis University School of Medicine, has been appointed chief of the orthopedic oncology section at St. Louis University Medical Center. He specializes in tumors and total joint replacements.

Dr. McDonald received his medical degree from the University of Minnesota School of Medicine, Minneapolis, in 1982. He completed his residency in orthopedic surgery and a fellowship in orthopedic oncology at Mayo Graduate School of Medicine, Rochester, Minnesota in 1987.

In 1988, Dr. McDonald completed a six-month fellowship in orthopedic oncology at the Rizzoli Orthopedic Institute, Bologna, Italy, where he was awarded the Hatcher Pathology Fellowship by the American Orthopedic Association.

- **Timothy S. Loth, M.D.,** assistant professor of orthopedics at St. Louis University School of Medicine, has been appointed chief of hand and microvascular surgery at St. Louis University Medical Center.

Dr. Loth received his medical degree from Albert Einstein College of Medicine, New York in 1980. He completed a fellowship in hand, upper extremity and microsurgery at the Hand Surgery Associates of Indiana in 1987. He was a member of the United States Army from 1976 to 1987.

Dr. Loth is board certified with the American Board of Orthopedic Surgery and has special certification in advanced cardiac and trauma life support. He has been recognized for his work with several distinguished awards, including the Mid-Central States Orthopedic Society Resident Award in 1984; the Army Commendation Medal in 1984; Outstanding Young Man of America Award in 1985; and the Army Commendation Medal First Oak Leak Cluster in 1987.

• **George A. Williams III, M.D.**, associate professor of medicine at St. Louis University School of Medicine, has been awarded a $20,000 grant from Pfizer Laboratories to study a new medication, Nifedibine GITS, in patients with silent ischemia and symptomatic coronary artery disease. The drug will be tested to determine if it prevents chest pains, and detects electrocardiographic signs of silent heart damage.

Dr. Williams joined the faculty of St. Louis University School of Medicine in 1977. He received his medical degree in 1972 from the Medical College of Wisconsin, Milwaukee.

• **Thomas W. Martin, M.D., Ph.D.**, assistant professor of pathology at St. Louis University School of Medicine, was awarded a three-year, $292,650 grant from the National Heart, Lung and Blood Institute to study the mechanisms involved in the regulation of the synthesis of lipid mediators by the cells that line the inner surface of blood vessels throughout the body.

• The National Institutes of Health has awarded joint, four-year grants totalling $1.3 million to researchers at the St. Louis University Medical Center and Emory University, Atlanta.

William S.M. Wold, Ph.D., professor of molecular virology, Institute of Molecular Virology, St. Louis University Medical Center, will collaborate with **Linda R. Gooding, Ph.D.**, professor of microbiology and immunology at Emory University. They will examine how human adenoviruses have evolved mechanisms that enable them to evade anti-viral defense functions of the immune system.

• **Barry M. Chapnick, Ph.D.**, professor of pharmacology, has been awarded a five-year, $650,000 grant by the National Heart, Lung and Blood Institute. He will continue his study of vascular control mechanisms. Specifically, Dr. Chapnick will investigate the participation of leukotrienes in the control of blood vessel tone. Results of his studies could lead to insights into treatment of diseases such as hypertension.

• **Jung S. Huang, Ph.D.**, associate professor of biochemistry, has been awarded a five-year, $741,669 renewal grant from the National Cancer Institute to study the role of polypeptide growth factors in the growth of normal and transformed cells.

Co-investigator on the grant is **Shuan S. Huang, Ph.D.**, assistant research professor of biochemistry.

They will investigate how production of growth factors induced by tumor viruses cause the transformation of normal cells. In 1983, Dr. Jung Huang and others discovered that the oncogen (v-sis) product of simian sarcoma virus, a tumor virus, is a platelet-derived growth factor (FDGF).

• **Terry Moore, M.D.**, professor of internal medicine and director of the division of rheumatology, has been awarded a $7,431 grant from the State of Missouri. The grant established an educational program for physical and occupational therapists on the subject of caring for patients with rheumatoid arthritis and juvenile rheumatoid arthritis.

St. Louis University School of Medicine is a selected site in the eastern Missouri region. The state program is funding eight arthritis centers throughout Missouri. This initial grant is part of a three-year funding project by the State of Missouri.

Dr. Moore joined the faculty of St. Louis University School of Medicine in 1976 after receiving his medical degree here in 1972.

• The Physician Assistant program of the School of Allied Health Professions, St. Louis University Medical Center, has been awarded a $72,000 educational grant to enhance its curriculum.

Funded by the division of medicine of the Department of Health and Human Services, the grant will provide money to modify the curriculum for AIDS education, home health care and geriatric medicine. In addition, it will improve recruitment for minority and disadvantaged students and support continued use of underserved areas for training sites in St. Louis and throughout the country.

The Physician Assistant program began in 1971 and has graduated 249 students. The program is designed for the junior and senior years of college. However, more than half of the students who enroll hold baccalaureate degrees in the sciences.

David W. Wagner, Ph.D., is chairman of the department and project manager for the grant.

• **Mary L. Ellsworth, Ph.D.**, assistant professor of physiology at St. Louis University School of Medicine, has been awarded a five-year, $247,642 grant from the National Heart, Lung and Blood Institute to study the relationship of hemoglobin oxygen affinity and oxygen delivery to cells in striated muscle.

Dr. Ellsworth joined the faculty of St. Louis University School of Medicine in 1988. From 1982-1988, she held positions in the department of physiology, Medical College of Virginia, Richmond. Dr. Ellsworth received her Ph.D. in physiology from Albany Medical College, New York, in 1981.

• Three research professors in the department of anatomy and neurobiology at St. Louis University School of Medicine have received awards totalling almost $1 million.

W. Michael Panneton, Ph.D., assistant professor, has been awarded a three-year, $214,000 grant from the National Heart, Lung and Blood Institute. He will investigate the sensory pathways of the upper respiratory passages and specific central nervous system cirsuits related to the diving reflex. This could lead to insights for understanding some cases of Sudden Infant Death Syndrome (SIDS) as well as how nasal receptors act as the first line of defense against inhaled irritants.

John H. Haring, Ph.D., assistant professor, received a three-year, $158,000 grant from the National Institute of Neurological and Communicative Disorders and Stroke to study serotonin plasticity. Haring studies the hippocampus, a specific region of the brain, where he causes changes in serotonin projections and compares this modified serotonin input to the normal serotonin plexus of the hippocampus.

Mark F. Jacquin, Ph.D., associate professor, has received two, three-year grants from the National Institute of Dental Research totalling $525,000. Jacquin will pursue his studies of normal circuitry of the brain stem and attempt to determine the mechanisms responsible for its development and how it responds to injury. Jacquin is the chief investigator on one grant and a subcontract representative on the other project which is part of a $2 million study involving the Medical College of Ohio in Toledo.

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

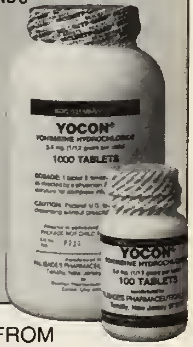
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

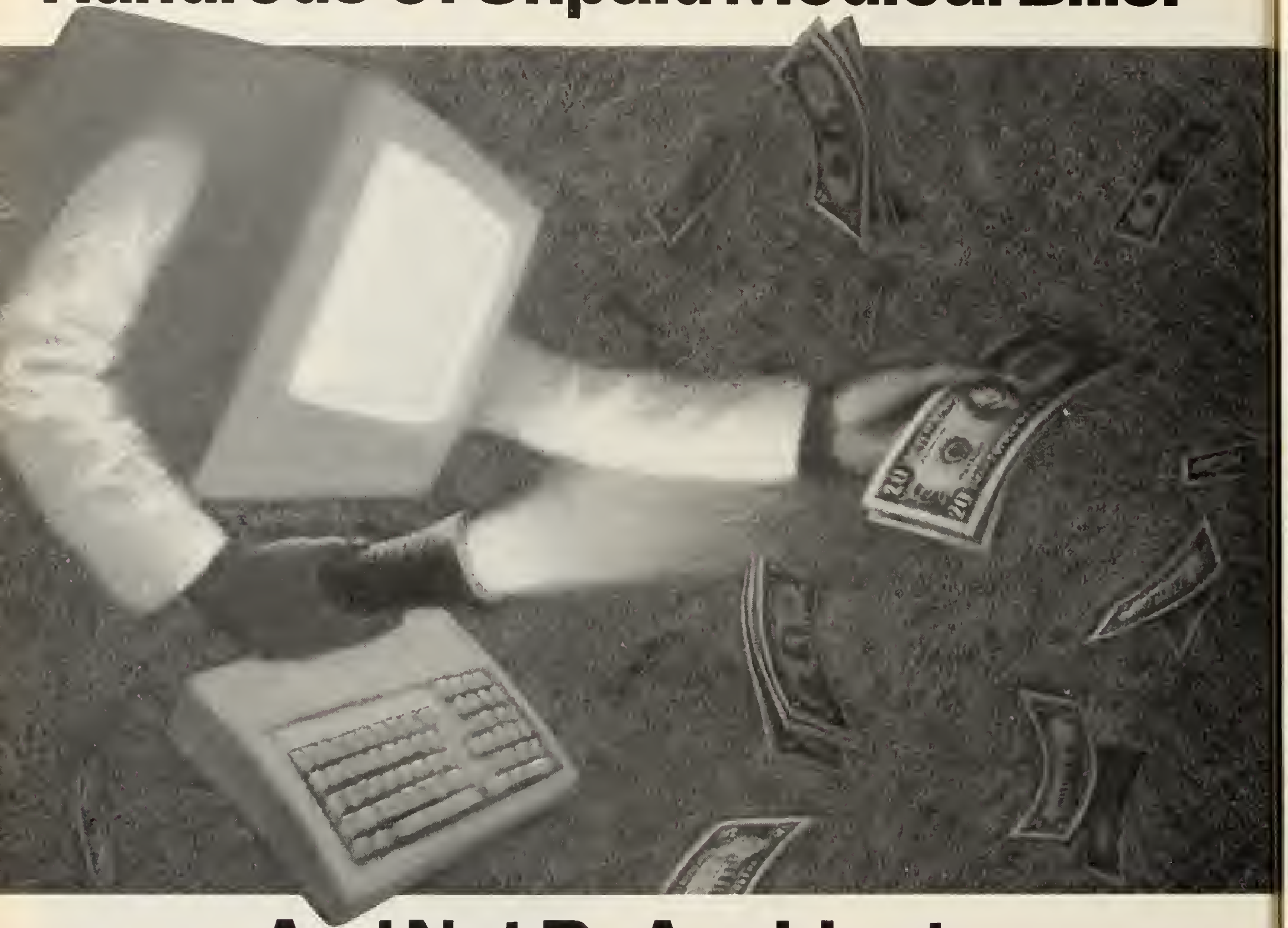
References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
PALISADES PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

A Medic Computer System Located Hundreds Of Unpaid Medical Bills.



And Not By Accident.

It's true. When a Medic Computer System replaced another in one large practice, it found thousands of dollars in bills never sent and insurance claims never filed.

Medic can help solve your cash flow problems just as easily. Since each transaction has a unique number, payments are easy to track. Our Aged Accounts Receivable Report will list overdue accounts by any amount or time frame you choose. And our Aged Insurance Claims Report even calculates the number of days since a claim was filed. So you can act before a bill gets too large or a claim gets too old.

Medic's already at work in more than 2,000 practices from coast to coast. And more than 6,000 physicians enjoy the security of a system backed by a $2.5 billion organization. Plus Texas Instruments hardware, a leader in expandability, compatibility and reliability. That makes Medic the system you can start with and stay with.

So choose a system that will turn your bottom line around. Call Medic. The specialists in computer systems for America's medical community.

Texas Instruments
Computing Products
Authorized Sales

Please tell me how Medic Computer Systems can help my practice
Name ________
Address ________
City ________ State ________ Zip ________
Phone (   ) ________ Number of physicians in practice ________
Specialty ________

Medic Computer Systems
8601 Six Forks Rd., Suite 300, Raleigh, NC 27615 2 89MM

m medic
computer systems

8601 Six Forks Road, Suite 300, Raleigh, North Carolina 27615, 919-847-8102, 1-800-334-8534. Other offices:
Ann Arbor, Atlanta, Austin, Boston, Chicago, Cincinnati, Dallas, Denver, Fort Lauderdale, Hartford, Houston, Jackson, Kansas City, Los Angeles,
Minneapolis, Nashville, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Richmond, San Antonio, San Diego, San Francisco, Tampa.

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this informatioin for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

February

4 Cardiology Update: Looking Toward the 1990's—Location: Adam's Mark Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 MRI in the Pelvis: Staging and Monitoring Response Time in Therapy—Location: Mallinckrodt Institute of Radiology. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110. 314/362-7130.

17 Antibiotics in Head and Neck Surgery--Location: The Uni-versity Hospital at St. Louis University, St. Louis, MO. Contact: Lynn Frohnapfel, Otolaryngology Department, The University Hospital at St. Louis University, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8887

19-24 Diagnostic Imaging Update--Location: Park City , Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

23-25 9th Annual Conference on Peritoneal Dialysis—Location: Loews Anatole Hotel, Dallas, TX. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

24-27 Advanced Cardiac Life Support Provider Course--Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd. St. Louis, MO 63104. 314/577-8167.

March

1-4 1989 Annual Meeting of the American College of Legal Medicine--Location: Marriott's Rancho Las Palmas Resort, Rancho Mirage, CA. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

3 Cancer Pain Management: Update 1989--Location: St. Luke's Hospital Institute for Health Education, St. Louis, MO. Contact: Laura Klaus, Director, Professional Education, American Cancer Society, 1280 Research Blvd., St. Louis, MO 63132. 314/567-9730.

4-11 Seventh Winter Congress, Diagnostic Imaging--Location: Courchevelle, France. Contact: Winter Congress, 21915 Roscoe Blvd., Suite 222, Canoga Park, CA 91304. 818/700-9821.

5-10 Magnetic Resonance Imaging Update 1989--Winter Conference--Location: Snowbird, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

6 Internal Medicine Review: Dermatology --Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

10-11 34th Urology Seminar--Location: Hyatt Regency Hotel, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

11-12 Family Practice Update--Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

13 Internal Medicine Review: Allergy/Immunology--Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

17 Phonosurgery and Related Voice Disorders--Location: The University Hospital at St. Louis University, St. Louis, MO. Contact: Lynn Frohnapfel, Department of Otolaryngology, The University Hospital at St. Louis University, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8887.

18-25 Traveling Medical Education Course--Location: Snowmass, Colorado. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 7920 Ward

Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

27 **Internal Medicine Review: Neurology**—Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

28-30 **The Impact of Cardiac Surgery on the Quality of Life: Neurological and Psychological Aspects**—Location: The New York Hilton, New York, NY. Contact: Ann J. Boehme, CMP, CME Office, Long Island Jewish Medical Center, New Hyde Park, New York, NY 11042. 718/470-8650.

31-April 1 **Advanced Trauma Life Support Provider Course**—Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8365.

31-April 2 **Organizational Systems**—Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

April

3 **Internal Medicine Review: Oncology**—Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

6-7 **16th Annual Obstetrics & Gynecology Symposium**—Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

10 **Internal Medicine Review: Hematology**—Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

13 **Issues Facing the Diffusion of Medical Technology**—Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, M0 63110. 314/362-7130.

14-15 **Midwest Conference on Eating Disorders**—Location: Hilton Plaza Inn, Kansas City. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110. 314/362-7130.

17 **Internal Medicine Review: Nephrology**—Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 **Internal Medicine Review: Cardiology**—Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

27-28 **Critical Care Update**—Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

1 **Internal Medicine Review: Gastroenterology**—Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

4-6 **Pediatric Advanced Cardiac & Life Support**—Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Engel, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

4-7 **Psychiatry Legal Environment: Medicine's Response**—Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Internal Medicine Review: Pulmonary**—Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

11-17 **Medical Malpractice: Law Theory and Practice for Attorneys, Physicians and Risk Managers**—Location: Colonial Williamsburg, VA. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

12-13 **2nd Annual Advanced Contact Lens Update**—Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

PIE's quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. PIE Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

QRP FACTS:

Strict Underwriting Criteria – Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

Scheduled Premium Reductions – Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

High Limits – Backed by our reinsurer, Lloyd's of London, PIE is able to offer higher coverage limits for qualifying doctors: up to $5 million for individual doctors and $7.5 million for group policies. Lloyd's of London is the largest reinsurer in the world.

Designed With Input from Doctors – PIE's QRP plan is an innovative modified claims-made insurance specially designed with input from PIE-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your PIE representative, or our headquarters office today.

The PIE Mutual
Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth Street
Cleveland, OH 44114
(216) 781-1087

Mutual
Insurance
Company
PIE

LICENSED AGENTS:

FRS & ASSOCIATES
6400 Prospect, Suite 138
Kansas City, MO 64132
(816) 444-6741

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

AIM HIGH

A PRESCRIPTION FOR
PHYSICIANS

Bothered by: ★ Too much paperwork? ★ The burden of office overhead? ★ Malpractice insurance costs? ★ Not enough time for the family? ★ No time to keep current with technology and new methods? ★ No time or money for professional development?
Join the Air Force Medical Team. We'll provide the following: ★ Competent and dedicated professional staff. ★ Time for patients and for keeping professionally current. ★ Financial security, a generous retirement for those who qualify ★ If qualified, unlimited professional development. ★ Medical facilities all around the world ★ 30 days of vacation with pay each year. ★ Complete medical and dental care ★ Low cost life insurance.

Want to find out more? Contact your nearest Air Force recruiter for information at no obligation. Call

CAPT LAMONT PACK
STATION TO STATION COLLECT
913-491-8640

AIR FORCE

MSMA

131st
Annual Convention

**Make plans
now
to attend!**

April 13-16, 1989
Marriott's Pavilion
St. Louis

In ten years your malpractice carrier may be just a memory.

ROFESSIONAL
LIABILIT
INSU
C

Unless it's Medical Protective.
The most important thing an insurance company sells is its promise to be here when you need help. Unfortunately, that's a promise that's easy to make, but hard to keep.

When you consider liability insurance, remember this. A company that's survived tough times before is more likely to come through a crisis period. And no company has weathered more of the industry's tough times than The Medical Protective Company because we pioneered professional liability coverage nearly a century ago.

For more information contact your Medical Protective Company general agent. He'll be here when you need him.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Ralph E. Borgmann, Philip E. Moppert
Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400

Thomas E. Meierant, Gregory Sherar
Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in Missouri Medicine is protected by copyright.

Manuscripts should be submitted to the editor, Donald G. Sessions, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Air Force **114**

Eli Lilly **70**

Forrest T. Jones **64**

Fred S. James **78**

Key Pharmaceuticals **99-100**

Medic Computer Systems **110**

Medical Defense Associates **66**

Medical Protective Company **114**

Merck, Sharp & Dohme **119-120**

Missouri PRO **118**

MOMEDICO **62**

Palisades Pharmaceuticals **109**

PIE Mutural Insurance Company **113**

Roche Labs **85**

Risk Control Associates **88**

Senior Patient **99**

Springer Clinic **118**

Timberlawn Psychiatric Hospital **100**

United Missouri Banks **76**

Wes Woodbury **102**

MISSOURI MEDICINE

Classified Advertising Form

1. Please print or type all information requested and return this form to Valerie A. Peters, Editorial Assistant, MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. **Deadlines for publication are the first of the month preceding the month of publication.** The deadline is the same for cancellation of a current ad. For example: An ad to run in the November issue should be received by MISSOURI MEDICINE no later than October 1. An ad running in the October issue that the advertiser wants to cancel for November should also be cancelled, in writing, no later than October 1. **Classified advertising costs:** $25.00 for non-members for the first 50 words or less, and 25¢ per word after that. The cost is $15.00 for members for the same ad, plus 25¢ per word beyond 50 words. File numbers cost an extra $1.25.

NAME ______________________________

ADDRESS ______________________________

CITY ____________________ **STATE** ______________ **ZIP CODE** __________

SIGNATURE ____________________ **TELEPHONE** ____________________

2. Check here if you want your ad to run continuously until you cancel. If you want to specify only certain months, skip this and go to number 3. ☐

3. Check here to specify the months your ad should run. Place the last two digits of the year in the blanks. Check to be sure you mail the ad prior to the deadline. No late ads will be accepted.

☐ Jan. 19 ___
☐ Feb. 19 ___
☐ Mar. 19 ___
☐ April 19 ___
☐ May 19 ___
☐ June 19 ___
☐ July 19 ___
☐ Aug. 19 ___
☐ Sept. 19 ___
☐ Oct. 19 ___
☐ Nov. 19 ___
☐ Dec. 19 ___

4. Check here if you want ad responses sent to you via a File number. This costs an additional $1.25. ☐

5. Check the heading you want your ad placed under. ☐

☐ Art For Sale
☐ Equipment For Sale
☐ Real Estate
☐ Physician Wanted
☐ Locum Tenens
☐ Other ______________________________
☐ Practice For Sale
☐ Misc. For Sale
☐ Position Wanted
☐ Services

6. Check method of payment:

Check made payable to MSMA. Amount $ ________
Please bill me. ☐

7. Use the lines below to print or type the ad exactly as it should appear. Additional paper may be used to complete the ad.

____
____
____
____

Classifieds

Physicans Wanted

FAMILY PRACTICE, INTERNIST, OB-GYN, AND PART-TIME RADIOLOGIST for multi-specialty group, outskirts of St. Louis. Please send your curriculum vitae to **File #13**, C/O **Missouri Medicine**, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

PEDIATRIC OR RETINAL OPHTHALMOLOGIST, Kansas City. Fellowship-trained Pediatric-Strabismus or Retinal Ophthalmologists to join board Certified Generalists and establish first subspecialty department. Ultramodern office with state-of-the-art equipment and vigorous growing practice. Some general Ophthalmology until subspecialty established. Ethical. Stimulating environment-clinical research — 40 papers published from our practice. Exceptional offer — salary, fringes, production incentive. Contact: John C. Hagan, III, M.D., FACS, Midwest Eye Institute of Kansas City, 2700 Hospital Drive, North Kansas City, MO 64116.

ONE PSYCHIATRIST — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board Certified or Eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, Board Certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

EMERGENCY MEDICINE IN IL AND MO -- Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further imformation contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 225 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

ANESTHESIOLOGIST: BC/BE to join congenial group of ten anesthesiologists with CRNA's in southwestern Missouri. State-of-the-art equipment in two progressive community hospitals. Full practice range including OB, pediatrics, hearts, and neuro. Excellent benefits. Contact: **S.R. Curry, M.D., Ozark Anesthesia Associates, 3660 S. National Ave., Springfield, MO 65807.**

INTERNIST -- Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). **For information contact:** Cheryl Kelow, Personnel Director, at 816/923-5800, ext. 225.

EMERGENCY MEDICINE, COLUMBIA: Emergency Physician wanted for private, not-for-profit hospital in university town. Medical staff and facility are progressive and state-of-the-art. Competitive salary and benefits which include paid malpractice insurance (occurrence!), health insurance, dental insurance, educational leave and one-month paid vacation. Freestanding emergency clinic and rural health clinic shifts also available. Interested physicians should send CV and letter of inquiry to Roger Willcox, M.D., FACEP, Director of Emergency Services, Boone Hospital Center, 1600 E. Broadway, Columbia, MO 65201.

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

MEDICAL DIRECTOR -- Opening for board-certified internist and/or physiatrist as director of in/out-patient rehab programs in CARF and JCAH accredited Missouri Rehabilitation Center. The area provides country living close to metropolitan area with Ozarks recreational opportunities. EEO/AA. Call Don Lamkins, Director, Missouri Rehabilitation Center, 600 N. Main, Mt. Vernon, MO 65712. 417/466-3711.

MEDIUM-SIZED MISSOURI town interested in both family practitioner (s) and internist (s). Excellent facilities. Guaranteed minimum. Outstanding opportunity. Send C.V. or inquiries to: **File #18**, C/O **Missouri Medicine**, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

CME Cruise/ Conference

1989 CME CRUISE/CONFERENCES on Medicolegal Issues & Risk Management — Caribbean, Mexico, Alaska/Canada, China/Orient, Scandinavia/Russia, Mediterranean, Black Sea, Trans Panama Canal. Approved for 2428 CME Category 1 Credits (AMA/PRA) and AAFP prescribed credits. Excellent group rates on finest ships. Pre-scheduled in compliance with IRS requirements. Information: International Conferences, 189 Lodge Ave., Huntington Station, NY 11746. 1-800-521-0076 or 516/549-0869.

Services

THINKING ABOUT SELLING YOUR PRACTICE? We have the buyers and can assist in all aspects of a sale including financing and valuation. We would be happy to discuss your specific situation in an initial private meeting at no cost or obligation to you. Call, THE MEDICAL MARKETPLACE, 314/997-0535.

Services

PHYSICIANS. Provider Placement Services specializes in the relocation of physicians throughout the U.S., with special emphasis in the southeast. Currently, we have several hospitals/clinics/groups with openings. All fees paid by employer. All inquiries kept in strict confidence. No obligation. Send C.V./Resume to: PPS, ATTN: Mr. Scott, 2221 University Blvd., West, Jacksonville, FL 32217, or call toll free 1-800-848-8722.

Investment

$5,000-$6,000: FOR PHYSICIANS -- Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including Taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Position Wanted

ANESTHESIOLOGIST: Board Certified with twelve years experience available for afternoon or weekend coverage in St. Louis metropolitan area (Missouri only). Can be on regularly scheduled or as needed basis. Have my own malpractice insurance. Send inquiries to: **File #17, C/O Missouri Medicine,** 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Equipment for Sale

MEDICAL OFFICE EQUIPMENT from Ambulatory Care Center, that includes Laboratory and X-Ray equipment, Audio booth, Holter Monitor and large trash compactor. Used 1 ½ years. If interested call 417/869-7006. Ask for Sybil.

Books for Sale

HISTORIANS . . .
FORMER MEMBERS.

Available now —History of the Cole County Medical Society (1819-present). Outlines origins of the Medical Society plus biographies of present and former members. Beautifully hardbound limited edition. Fine model for societies seeking to write their own histories. $35 + $2.18 tax. Send your order to: Summers Publishing Co., 515 E. High, Jefferson City, MO 65101.

SPRINGER CLINIC

- Dermatology
- Family Practice
- Obstetrics/Gynecology
- Psychiatry
- Pulmonology

Rapid growth of Springer Clinic, a 55 member multi-specialty group, has created opportunities for BC/BE physicians in the above practices.

Competitive guaranteed salary and production incentives initially with partnership opportunities within two years.

Call (918) 495-2631 or send CV to:
Richard A. Callis, Administrator
Springer Clinic
6160 South Yale
Tulsa, Oklahoma 74136

PRO President/Medical Director

Missouri's PRO has secured a three-year contract and seeks President/Medical Director. Position acts as CEO and reports to Board of Directors. Requirements:

- **Physician**
- **Health-related experience in high-level administration**
- **Knowledge of QA/UR and peer review**

Responsible for administration of all aspects of Foundation activities to ensure compliance with established objectives and contractual requirements. Salary negotiable. Excellent fringes. Send resume to:

MPCRF Search Committee-President
311-A Ellis Blvd.
Jefferson City, MO 65101

VASOTEC®

(ENALAPRIL MALEATE | MSD)

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema*. Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms Angioedema associated with laryngeal edema may be fatal **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics. heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident

If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary

Neutropenia/Agranulocytosis. Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered

Precautions: *General: Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions*.)

Surgery/Anesthesia In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension. Patients should be cautioned to report lightheadedness especially during the first few days of therapy If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician

Hyperkalemia Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia. Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia

NOTE As with many other drugs, certain advice to patients being treated with enalapril is warranted This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension. Patients on Diuretic Therapy Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release. The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy – Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline Enalapril was not teratogenic in rabbits However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose)

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters

There are no adequate and well-controlled studies in pregnant women VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate It is not known whether this drug is secreted in human milk Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use Safety and effectiveness in children have not been established

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 298/ patients.

Hypertension. The most frequent clinical adverse experiences in controlled trials were. headache (5.2%), dizziness (4.3%), and fatigue (3%)

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%)

Heart Failure The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular. Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest; pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation; palpitation

Digestive. Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy

Respiratory Bronchospasm, rhinorrhea, asthma, upper respiratory infection

Skin. Herpes zoster, pruritus, alopecia, flushing, photosensitivity

Other. Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy

Angioedema Angioedema has been reported in patients receiving VASOTEC (0.2%) Angioedema associated with laryngeal edema may be fatal If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia

Creatinine, Blood Urea Nitrogen. In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists In clinical trials, less than 0.1% of patients discontinued therapy due to anemia

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred

Dosage and Administration: *Hypertension*. In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval In such patients, an increase in dosage or twice-daily administration should be considered If blood pressure is not controlled with VASOTEC alone, a diuretic may be added

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS)

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL) For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function The maximum daily dose is 40 mg

For more detailed information, consult your MSD representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486.

J6VS18R(815)

MSD

MERCK
SHARP &
DOHME

IT MAY CHANGE THE WAY YOUR PATIENTS FEEL ON ANTIHYPERTENSIVE THERAPY

MSD
MERCK
SHARP&
DOHME

FOR MANY HYPERTENSIVE PATIENTS
START WITH ONCE-A-DAY

VASOTEC®

(ENALAPRIL MALEATE | MSD)

For a Brief Summary of Prescribing Information,
please see next page of this advertisement.

Copyright © 1987 by Merck & Co., Inc.

J6VS18R

EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

Journal of the Missouri State Medical Association

March 1989

[redacted]

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

MAR 22 1989

In this issue:

- MSMA Annual Convention Preliminary Program
- MSMA & MSMF Financial Statements

15
14
13
12
11
CHECK OUT MOMEDICO!
X
X
X
22
21
20
19
18
17
X
29
28
27
26
25
24
23
APRIL
1989

APRIL 13–16 . . .

Mark Your Appointment Book, Doctor

Plan now on attending the Missouri State Medical Association's 131st Annual Convention in St. Louis this year. Stopping at the MOMEDICO booth (#6) could really pay off for you later on.

We have a free gift for you, and when you complete the registration card at our booth, you become eligible for our drawing of a unique prize. We also have waiting for you MOMEDICO literature, of vital importance to your practice. It illustrates how MOMEDICO has become the *premier* doctor-owned captive medical professional liability insurance company in Missouri. Further, it points out the many *exclusive advantages* of receiving your professional liability coverage from MOMEDICO.

We'll be looking for you at the show. Stop by and pick up your free gift. Here's hoping *you* win the MOMEDICO Grand Prize, too.

MOMEDICO

Better Protection. Together.

10795 Watson Road,
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

Contents

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
MAR 22 1989

MSMA PHONE BOOK

Missouri State Medical Association	314/636-5151
American Medical Association	312/645-5000
MSMA Physicians' Health Program	314/768-4990
MOMEDICO	1-800-392-8039
Dodson Insurance Group	1-800-825-3760
MSMA Retirement Plan/ E. F. Hutton	*(Call collect)* 314/725-9690
Forrest T. Jones	1-800-892-7272
Fred S. James	KC 1-800-892-7105 St. Louis 1-800-445-9513
Health Care Financing Administration	816/426-5233
Intrav	314/727-0500
Medicaid Provider Relations	1-800-392-0938
Medicare Provider Relations	1-800-392-3070
Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
Missouri Department of Health	314/751-6400
Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	*(Preadmission)* 1-800-392-8060 *(General Info)* 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs	314/751-8042
Missouri State Board of Registration of the Healing Arts	314/751-2334

Cover

Photograph of melting snow near the south central Missouri town of Dora, population 75, taken by Kailash Tarneja, M.D., a radiologist in West Plains, Missouri.

Guest Editorial

139 **I'm Afraid of What Might Be Out There!**
Wilfred E. Wooldridge, M.D., *Springfield, Missouri*

Special Information

141 **MSMA Financial Statement for 1988**
146 **MSMF Financial Statement for 1988**
149 **Preliminary Program for the MSMA 131st Annual Convention**

Scientific Articles

157 **Autologous Blood Transfusion**
Anne T. Thomas, M.D. and Michael C. Perry, M.D., F.A.C.P.
Columbia, Missouri
162 **Splenosis Masquerading as Small Bowel Neoplasm**
Michael Metzler, M.D., James Long, M.D. and Alfred Llorens, M.D.
Columbia, Missouri
165 **Vaginal Hysterectomy Combined with Liposuction**
S. Robert Kovac, M.D.
St. Louis, Missouri

Departments

127 Progress Notes
131 Letters to the Editor
138 Editor's Desk
135 Auxiliary Message
137 Practice Management
171 In Memoriam
175 New Members
179 Medical School News
183 Continuing Medical Education
185 Physicians' Recognition Award
187 Information for Contributors
187 Index to Advertisers
189 Classifieds

Minority Perspectives on AIDS

Featured Speakers

Washington C. Hill, M.D., F.A.C.O.G.
Director, Division of Maternal-fetal Medicine
Director, Perinatal Center
Creighton University Medical Center

Beny J. Primm, M.D.
Executive Director
Addiction Research and Treatment Corporation
Brooklyn, New York

Reed Tuckson, M.D.
Commissioner of Public Health
Washington, D.C.

Sala Udin
Executive Director
Multi-Cultural Training Resource Center
San Francisco, CA

Rueben Warren, M.D.
Assistant Director for Minority Health
Centers for Disease Control

Sponsors

Missouri Department of Health,
Bureau of AIDS Prevention

Kansas City Metropolitan AIDS Program

St. Louis Metropolitan AIDS Program

Midwest AIDS Training & Education Center
(MATEC)

March 28, 29 & 30
St. Louis

Contact:

Office of Continuing Education
University of Missouri-Columbia
School of Health Related Professions
(314) 882-4106

Missouri Medicine

Vol. 86, No. 3 — *Journal of the Missouri State Medical Association* — March 1989

Editor
Donald G. Sessions, M.D.
Associate Editor
Ramona M. Chapman, M.D.
Editor Emeritus
Jordan W. Burkey, M.D.
Managing Editor
Susan Flanigan Gold
Business Manager
Royal O. Cooper
Editorial Assistant
Valerie A. Peters

EDITORIAL BOARD

Anesthesiology
Mark G. Zukaitis, M.D.
Cardiovascular Surgery
Jack J. Curtis, M.D.
Dermatology
Philip C. Anderson, M.D.
John DeSpain, M.D.
Ernest Lorenc, M.D.
Emergency Medicine
David M. Trantham, M.D.
Family Practice
William D. Bradshaw, M.D.
Carl R. Kruse, M.D.
Kirby L. Turner, M.D.
Gastroenterology
Jay P. Marshall, II, M.D.
Hematology
William H. Crosby, M.D.
Internal Medicine
John S. Daniels, M.D.
Stephen Hamburger, M.D.
Robert K. Skillman, M.D.
Neonatology
Elizabeth J. James, M.D.
Neurosurgery
Keith Rich, M.D.
Obstetrics and Gynecology
James Daly, M.D.
Oncology
Michael C. Perry, M.D.
Ophthalmology
John C. Hagan, III, M.D.
F. Thomas Ott, M.D.
Orthopedics
William P. Thorpe, M.D.
Otorhinolaryngology
J. Regan Thomas, M.D.
Pathology
Scott A. Martin, M.D.
Pediatrics
R. Don Blim, M.D.
Physical & Rehabilitation Medicine
Paul E. Kaplan, M.D.
Plastic Surgery
LeRoy Young, M.D.
Psychiatry
William F. Clary, M.D.
J. C. Corvalan, M.D.
Radiation Therapy
MacDonald B. Logie, M.D.
Radiology
Donald R. Germann, M.D.
General Surgery
Mark S. Cotner, M.D.
Richard O. Craig, M.D.
Donald Silver, M.D.
Vascular Surgery
W. Kirt Nichols, M.D.
Urology
George M. Austin, M.D.

PUBLICATIONS COMMITTEE

Chairman
Donald G. Sessions, M.D.
Vice-Chairman
Ramona M. Chapman, M.D.
Members
Jack J. Curtis, M.D.
John S. Daniels, M.D.
Stephen Hamburger, M.D.

MSMA Officers

President	T. J. Cooper, M.D., *St. Louis*
President-Elect	Marvin A. Singleton, M.D., *Joplin*
Secretary	Norman P. Knowlton, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Kenneth R. Smith, Jr., M.D., *St. Louis*
Vice President	William R. Richardson, M.D., *Union*
Vice President	Herman J. Hausheer, M.D., *Independence*
Speaker	Arlen D. Winsky, M.D., *Springfield*
Vice-Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*

Councilors

Gary A. Dyer, M.D., *St. Joseph,* Chairman
Dorothy D. Reister, M.D., *Kansas City,* Vice Chairman
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *St. Louis*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
Carol F. Williams, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Louis*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A. J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Raymond J. Caffrey, M.D., *Independence*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Evan Saunders, medical student, *St. Louis*
Charles Barbee, M.D., *Columbia*
Victoria Martin, M.D., *Shawnee Mission, KS*

Vice Councilors

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Carl R. Kruse, M.D., *Palmyra*
Meredith Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Mark W. Martin, M.D., *Lee's Summit*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Carole Matteri, medical student, *St. Louis*
William Dorzab, M.D., *Kansas City*
Charlene Prather, M.D., *Kansas City*

AMA Delegates

Robert McDonald, M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*
George M. Bohigian, M.D., *St. Louis*
Melvin C. Kasten, M.D., *Cape Girardeau*
Vernon H. Balster, M.D., *St. Louis*
Walter A. German, M.D., *Springfield*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251

Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.

Subscription rates: $20 per year.

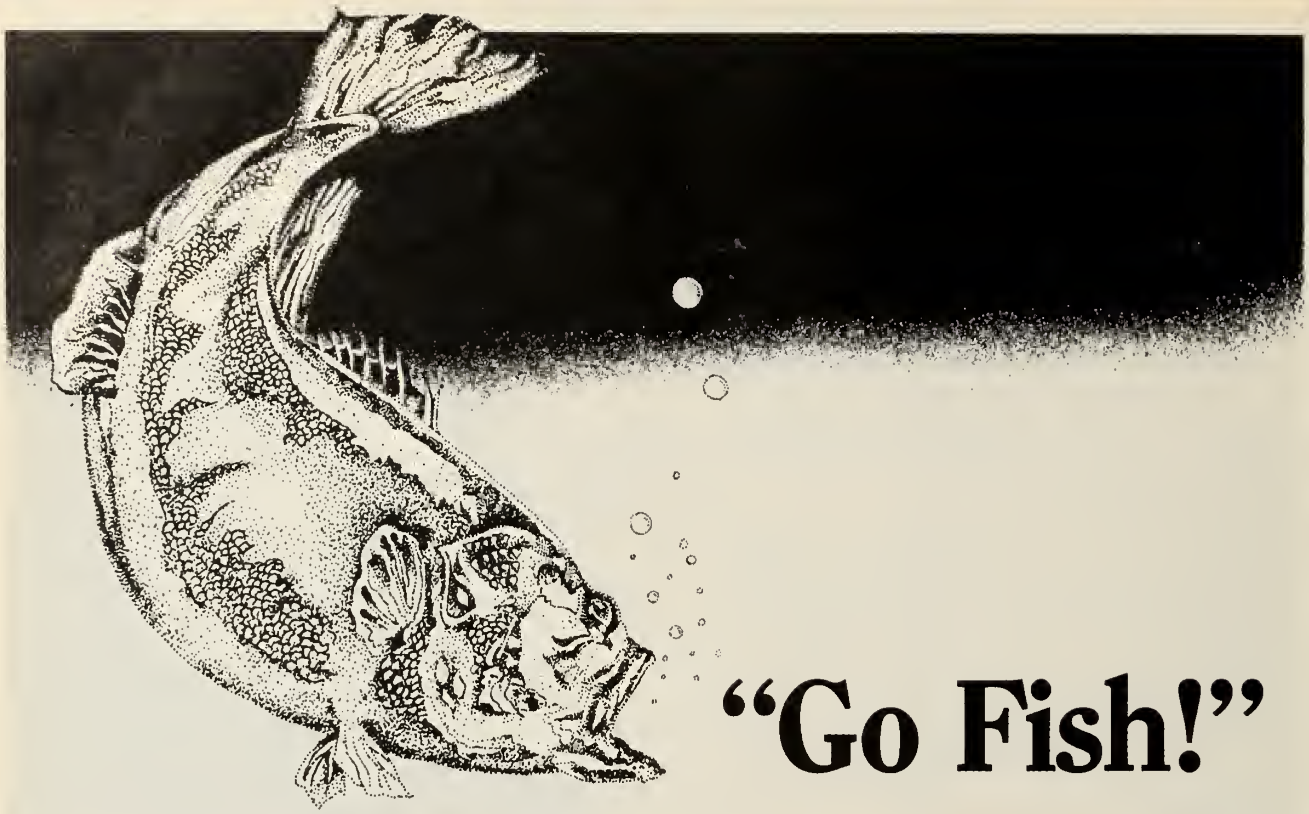
Second class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Department, P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.

Copyright © 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

MEDICAL PROFESSIONAL LIABILITY INSURANCE



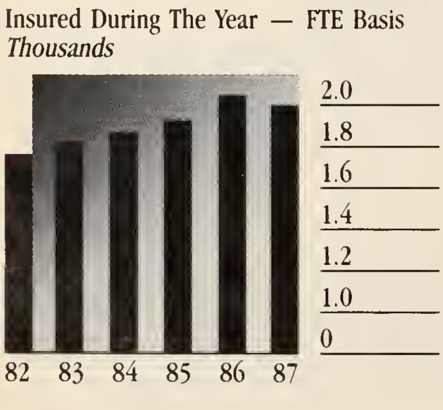
It's a cute little card game for kids, but hardly appropriate for a health care professional such as yourself. So why are you still playing with your **medical liability insurance?**

You remember how your last insurance company enticed you with temptingly low premiums, and then gave you exorbitant renewal rates that sent you fishing. Or how about that other insurance company that disappeared on renewal, and left you playing "Blind Man's Bluff." Alone.

Stop playing someone else's game, and talk with us at Medical Defense Associates. **MDA is a not-for-profit medical liability insurance company** that was formed by doctors to serve only doctors.

For over 12 years now, MDA has been offering consistently competitive medical liability insurance rates and superior career protection for doctors like you. We have a reputation for protecting YOUR reputation with aggressive defense of unmerited claims. No games. No tricks. No hidden cards. That's why **MDA insures more of Missouri's doctors than any other medical liability insurance company.**

Don't play "Fish For Your Insurance." Hook-on to the winner. We don't play games.



Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MSMA Progress Notes

3rd HMSS meeting held January 28-29

More than 50 people attended the third annual MSMA Hospital Medical Staff Section (HMSS) meeting on January 28-29 in Jefferson City.

Howard Lang, M.D., of Greenbrae, CA, Chairman of the AMA-HMSS Governing Council, presented the keynote address. Other speakers included David Wilkinson, M.D. of St. Louis who is a member of the State Board of Registration for the Healing Arts; James S. Roberts, M.D. of Chicago, Senior Vice President for Research and Standards, JCAHO; James C. Redington, M.D., Chairman of the MSMA-HMSS Steering Committee; Fred Peterson, M.D., Missouri PRO and Richard V. Bradley, M.D., president of MOMEDICO. ■

January 28 Council meeting highlights

The MSMA Council met January 28 at the Ramada Inn in Jefferson City. Highlights of the meeting include:

A complete report on state legislative concerns by John I. Matthews, M.D., Chairman of the Committee on Legislative Affairs.

MSMA will sponsor the following March workshops: Medicare Update—March 28, Airport Marriott Hotel, St. Louis; March 29, Holiday Inn University Plaza, Springfield; March 30, Holiday Inn Executive Center, Columbia and March 31, Marriott Plaza Hotel, Kansas City. "How to Get Started in Medical Practice" will be March 28-29 at the Henry VIII Hotel in St. Louis.

Warren C. Lovinger, M.D. of Nevada will receive the seventh MSMA Citizenship and Community Service Award at the Annual Meeting in April.

MSMA in conjunction with the University of Missouri-Columbia will co-sponsor a memorial to Larry G. Piepergerdes, M.D.

Donald G. Sessions, M.D. was reappointed as editor of Missouri Medicine.

The Task Force on MSMA Membership Benefits will meet two or three more times so that a thorough report will be presented to the Council. The Task Force has acquired information from the following companies providing MSMA benefits: Prudential-Bache regarding retirement planning; Corroon & Black of MO, Inc. regarding the Association's insurance program; I.C. Systems, Inc. regarding collection service; Dodson Insurance Group regarding workers's compensation savings plan; Professional's Groups Services regarding group purchasing; Fred S. James & Co of Missouri regarding MSMA disability, office overhead and hospital indemnity plan and Forrest T. Jones & Co., Inc. regarding major med and term life insurance programs. Many other member benefits are being investigated.

David Wilkinson, M.D., a member of the State Board of Registration for the Healing Arts, reported that the Attorney General (Board's legal counsel) feels that it would not be wise at this time to have an actual definition of the "practice of medicine" promulgated as a rule. In Executive Session, the Council referred the matter to the Executive Committee for further study if needed.

George Bohigian, M.D. is running for AMA Board of Trustees with Walter German, M.D. serving as campaign manager and Kay Dinolfo, MSMA director of communications, serving as campaign coordinator.

Richard V. Bradley, M.D., president of MOMEDICO, reported that the firm is $2 million in the black. He reminded those present that the three-year moratorium on tort reform legislation expires in 1989 and that MSMA needs to decide what (if any) changes to propose to the Legislature.

Gary Dyer, M.D., Council Chairman, gave the Executive Session report. The Council approved the Executive Committee's recommendation that individuals holding the offices of President, President-elect, Executive Vice President and Executive Director shall have their spouses travel to, attend and assist the official in carrying out his or her duties in representing MSMA at the Annual Convention as well as meetings of component organizations, affiliated groups and any other meetings approved by the Chairmen of the Council.

The St. Louis Metropolitan Medical Association recently installed Dan O'Sullivan, M.D. as president, William Huffaker, M.D. as president-elect and Jo-Ellyn Ryall, M.D. as vice president. Cole County Medical Society installed Sid Belshe, M.D., as president and

Lawrence Henry, M.D. as president-elect. Marjorie Sirridge, M.D. was installed as president of Metropolitan Medical Society of Greater Kansas City. Harold Lurie, M.D. was installed as president and Keith LaFerriere as president-elect of the Greene County Medical Society.

Upon recommendation from Boone County Medical Society, the Council approved sending a letter to the University of Missouri-Columbia Chancellor expressing its concern that the Medical School Dean and the University Hospital Administrator report to different administrators. Currently the Dean reports to the Provost while the Hospital Administrator reports to the Chancellor. MSMA believes it is in the best interest of medical education for these two people to report to the same person.

The Council also approved consolidating the Howard and Cooper County Medical Societies with Boone County Medical Society. Moniteau and Osage County Medical Societies will be consolidated into Cole County Medical Society.

The Council approved inviting the Director of the Department of Health and the Director of the Department of Social Services to Council meetings. At the discretion of the Council Chairman they may be asked to present a report at these meetings.

The Missouri Patient Care Review Foundation is still interviewing individuals for the Medical Director position. The PRO's new office is 505 Hobbs Dr. in Jefferson City.

Reports were also presented by the Committee to Preserve Health Care, the Physicians' Health Committee, the Committee on Sunsetting, PAC and the Young Physicians Committee.

The next Council meeting will be held at 3 p.m., April 12 at the Marriott Pavilion in St. Louis. ■

1989 Certificate of Need Handbook

The most current information on the Certificate of Need process is contained in the 1989 handbook approved January 5, 1989 by the Missouri Health Facilities Review Committee. Specific guidelines and expectations for preparing an application are outlined. Only written information submitted for such applications will be evaluated for compliance to the information requirements published in the handbook. Please use copies of the forms contained in the handbook.

For more information or copies of the 1989 handbook, contact the Certificate of Need Program, 600 Monroe Street, Jefferson City, MO 65101. 314/751-6403. ■

National practitioner data bank

Authorized by the Health Quality Improvement Act of 1986, a $15.9 contract recently established the National Practitioner Data Bank. The data bank will collect information concerning:

- all payments made on behalf of any licensed health care provider as a result of a malpractice claim or settlement;
- licensure disciplinary actions taken by state medical and dental boards;
- professional review actions by health care entities with peer review processes (e.g. hospitals or health maintenance organizations) when such actions adversely affect the clinical privileges of a physician or dentist for more than 30 days and are based on a review of the practitioner's professional competence or conduct; and
- adverse actions taken by professional societies against the membership of a physician or dentist following formal peer review of the practitioner's professional competence or conduct.

Reports will be required only after the data bank becomes operational – an event projected for this summer. There will be no retroactive reporting. ■

Medical malpractice non-economic damages

According to the February 14, 1989 Missouri Register, the director of the Division of Insurance is required to calculate the new limitation for non-economic damages in medical malpractice award pursuant to section 538.210, RSMo regarding the medical malpractice award limit.

Using the implicit price index for personal consumption expenditures as required by that rule and using January 1, 1986 as the base, the calculation is shown as follows:

Jan. 1, 1986 IPD	113.4
Jan. 1, 1989 IPD	126.6
Changes 1/1/86-1/1/89	13.2
% change	11.64%
New limits	
($350,000 X 1.1164)	$390,741
rounded to	$391,000

■

Measles outbreak

Missouri is experiencing one of the largest epidemics of measles (Rubeola) in the United States with more than 180 suspected cases since November 5. Blue Springs and Lee's Summit have reported the most cases but Kansas City and its suburbs, Cedar County to the south, Johnson County to the east, St. Louis County and the Joplin area have also reported cases.

In order to contain any subsequent outbreaks, please report all measles-like illnesses to your local health department. Include febrile rash illnesses which do not strictly meet the critical criteria for a diagnosis of measles, but which may turn out to be non-classical, mild measles cases.

The health department laboratory is available to test selected sera at no expense. This testing will be useful for early cases in new areas and for non-classical cases in established epidemics. Selection of patients for free testing should be discussed with public health staff when reporting cases. The local health department can arrange for shipping specimens to the state laboratory. ■

Walking doctors directory

Missouri physicians, exercise therapists, research scientists and other health professionals who walk as their primary exercise and who recommend walking to their patients may apply for a free listing in the new **Walking Doctors Directory.** McGraw-Hill will publish the directory in 1990. To receive the profile questionnaire contact: **Walking Doctors Directory,** c/o Walking World, P.O. Box K, Gracie Station, New York, NY 10028 or call 212/879-5794 and leave your name, address and telephone number. ■

Medicare new provider workshops

Workshops for new physicians, suppliers, and their office staffs are conducted every other month at General American's National Service Center, 13045 Tesson Ferry Road, St. Louis.

Because physicians, suppliers and staff members who attend represent various specialties, and generally, are unfamiliar with Medicare billing practices, the information presented is basic and especially helpful to new office personnel. Please make reservations one month in advance by contacting the Professional Relations Department at 314/842-1310.

Workshops are scheduled for the following dates: April 19, June 28, August 31, October 26 and December 21. ■

EMS highlights

The Missouri State Advisory Council on Emergency Medical Services (EMS) recently met in Columbia. Two areas generating the most discussion were: 1) the requirement that a level III trauma center be located at least 20 (later revised to 15) miles away from a level I or II trauma center; and 2) the requirement that level II trauma centers have an operating room staffed in-house, 24 hours per day.

The Department of Health will finalize the draft **Adult Trauma Center** rules based on the comments of the State Advisory Council. The finalized draft will be mailed to interested parties for additional comment. No date has been set for review of the draft trauma center rules by the Missouri State Board of Health.

The State Advisory Council will discuss draft pediatric trauma center rules and draft trauma triage and transfer protocol rules at its next meeting which is scheduled for April 5 in Columbia. ■

MSMA on the move

Believe it or not, the first stage of the renovation of 113 and 115 Madison has been completed. February 22 was moving day for several of the MSMA staff. The second floor of 115 Madison is now temporarily occupied by Susan Gold, Kay Dinolfo, Valerie Peters, Tom Holloway, Ron Ellison, Becky Jungermann and Ruth Pack. The rest of the staff moved from 113 Madison to the new building the following week. At that time, the workers began the remodeling of 113 Madison. The remodeling should take approximately two months and be finished around the first of May. The new furniture has been ordered and should arrive during the middle of April.

The new accommodations in 115 Madison are both comfortable and attractive. The colors and the design are pleasing and all comments have been favorable. So far everything is taking place right on schedule. So in a few months, after the MSMA Annual convention in St. Louis in April, the new MSMA Headquarters should be ready for visitors. ■

In **1928**, the U.S. government established the Federal Radio Commission, sound was added to the movies and United Missouri Bank opened its Financial Counseling Division.

United Missouri Bank announced Financial Counseling Services in '28. It didn't make national headlines. It did make a difference.

Since then, United Missouri has helped hundreds of individuals and their attorneys construct estate plans.

The bank attributes its success to personal service. United Missouri's experts meet privately with customers. They get to know the customer's needs. So, the customer gets a highly individualized estate plan.

Over the years, it has made a difference with its customers' estate plans, retirement plans, trusts, investments and much more.

Today, United Missouri Bank still makes a difference. It can make a difference for you. To ask about Financial Counseling Services, call United Missouri's Craig Huntley at 556-7737. And, pick the proven performer.

UNITED MISSOURI BANKS
Members FDIC

P.O. Box 419226, Kansas City, Missouri 64141-6226

Letters to the Editor

Comments on "the Race"

Dear Dr. Sessions:

Thank you for allowing me to comment on "The Race." I see how I make an assessment of life as a race. I say that my race is fun, difficult, worthwhile, purposeful...I find I am in a constant conversation comparing my race, to everyone else's race. I am seeing again how this assessment blinds me from living in the moment.

How am I doing in this race? How long can I keep up this pace? How will I feel at the end of this race? Why can't "they" see how difficult my race is (compared to their race)?

How can we race in the mood of peace, instead of panic? Acutally, a series of ongoing panics...

As you said, who (and what) are we racing anyway?

Hypoxemically yours,

Dana Hirsch, M.D.
Anaheim, CA

A Plea for Visibility

Dear Editor,

I am writing to ask your help in raising the visibility of interstitial cystitis (IC) in Missouri. IC is a little-known bladder disease.

Last year I wrote to Governor Ashcroft who sent my letter to the Missouri Department of Health. He suggested I get in touch with you. Dr. Harmon wrote that Missouri Medicine is the official journal of the Missouri State Medical Association and has a wide readership for physicians of all specialties in the state.

I have had interstitial cystitis for over 13 years, and it took nine years to find a urologist who diagnosed me. My IC caused me to have a very, very, very severe leg pain.

I am the Missouri State Coordinator for the IC Association, which is a not-for-profit nationwide health organization working to find a cure for IC. There is only one paid staff member in New York City. I'm a volunteer, and postage costs, etc., come out of my billfold. One of my goals is to help spread the word about interstitial cystitis to medical people and the general public.

Please let me use your "Letters to the Editor" column to provide your readers with the basic IC information outlined below.

Thank you for your cooperation.

Sincerely,

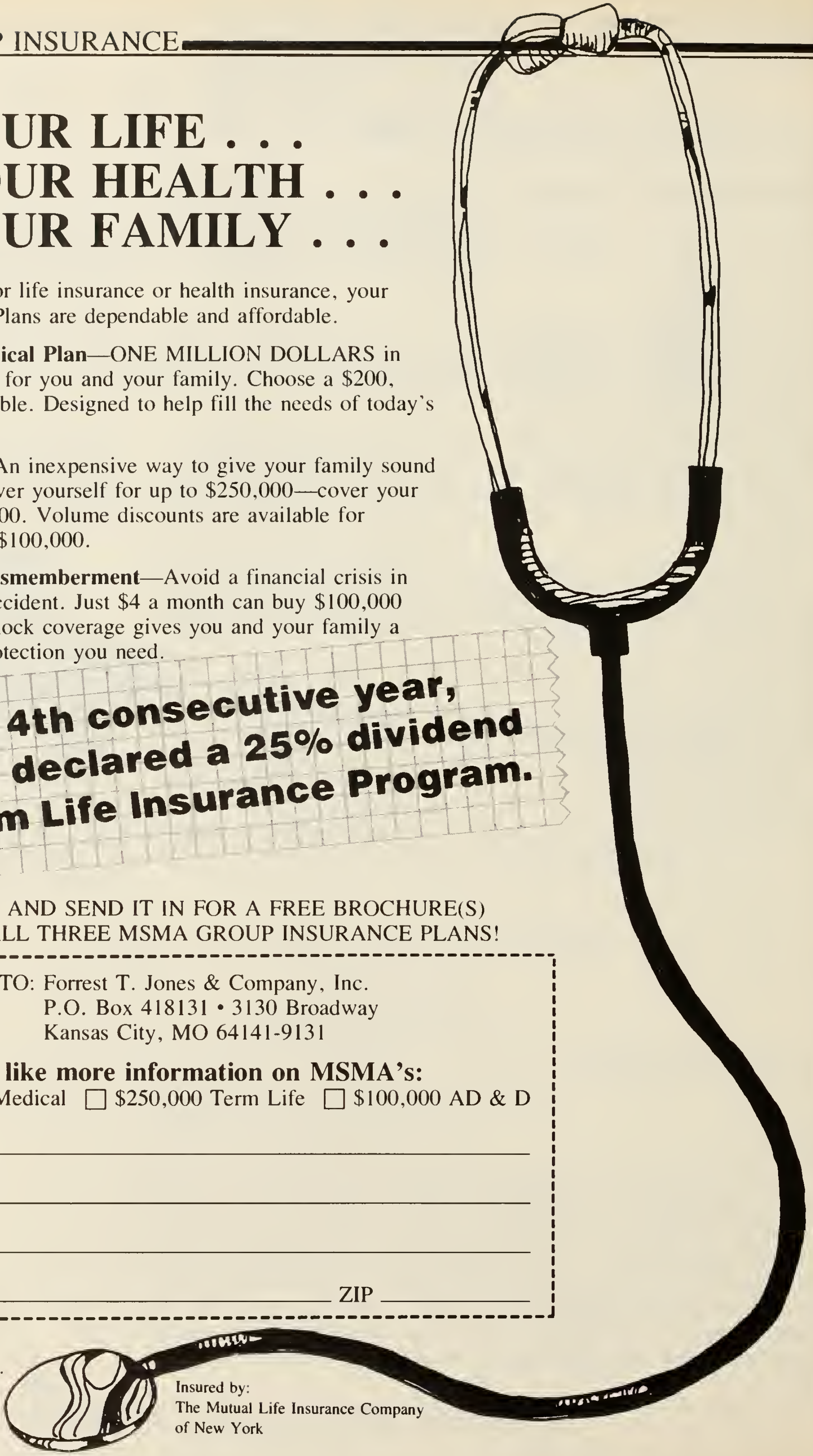
Betty J. Hinken
Missouri State Coordinator
for Interstitital Cystitis

Hundreds of thousands of American women, men and children have a little-known bladder disease which often goes undiagnosed for several years. This painful disease is called interstitial cystitis, and it is an inflammation of the bladder wall. The symptoms can't be ignored. More females than males have IC. Many patients have an almost constant need to urinate (as many as 40 to 60 times or more in a 24-hour period), burning and continuous pain. The cause and cure are unknown. It is not a contagious disease, and it is not caused by a bacteria. Treatments are available to relieve the symptoms but most have no long-lasting effect.

The Interstitial Cystitis Association was founded by Dr. Vicki Ratner in 1984. Until that time no one talked about IC. The federal government in 1987 began funding for interstitial cystitis. This was the first research for a disease which has been known about since 1830.

For information, please contact the Interstitial Cystitis Association, P.O. Box 1553, Madison Square Station, New York, NY 10159. The ICA is a not-for-profit nationwide health organization working to find a cure for IC. The Missouri State Coordinator is Betty J. Hinken, 602 S. Stella, Harrisonville, MO 64701; 816/884-4755.

It is estimated there may be as many as 500,000 IC patients in the U.S. I have 160 names of IC people in Missouri, and there are many more.



MSMA GROUP INSURANCE

FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $200, $500, or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S) ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:

☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ____________________

ADDRESS ____________________

CITY ____________________

STATE ____________________ ZIP __________

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

Insured by:
The Mutual Life Insurance Company
of New York

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

I wonder what this racing is all about — for us doctors, for us Americans, for us humans. What is the prize for winning the race?

The Race

It's early on the day of the race. I get up slowly, trying to emulate the example of my dog. Every time he arises he does a full-body, four-leg stretch accompanied by a loud yawn. His family has probably been doing this for hundreds of years. I stretch slowly and gather my gear. The sun isn't up yet. It is cold this morning. I put on my extra-warm running clothes. As I slowly lace up my racing shoes I am reminded of other racers and athletes. I see my self as a gladiator strapping on his equipment before going out to do battle. It's going to be tough out there today. I have trained for this and I am ready.

I drive slowly through the gathering light and arrive a little early. That's fine with me. I stretch and get ready mentally. I don't talk with anyone, concentrating on full preparation for the race. It is clear and cold but there is very little wind. The sun comes up. It is spectacular. This is it.

I check my chronometer. I'll keep my own time today. That way I'll know how I'm doing. I decide on a standing start. I'm off and running smoothly. I pass a group of four women and accelerate down the initial slope. There is no ice on the path but the ground is frozen, rock hard. I run directly into the sun. What a glorious feeling! I run parallel with an older man around the first turn and pass him as I go up a short, steep hill. I cruise comfortably down the far hill and across the bridge to the straightaway.

I notice a sharp pain in my left chest. "Is this it?" I ask myself. I slow imperceptibly. The pain transforms into an ache in my left shoulder and disappears. "Chest wall muscle pain," I think. "I lucked out again." I am running uphill now and am getting short of breath. I "break through" and it's less work than before. I am feeling great. Is it an adrenaline rush or just hypoxia? It doesn't matter.

I run through a pack of ducks and geese that are eating by the path. Smartly, they ignore me. I won't have to employ my master defense plan. Deftly I dance through their green droppings. I pass the halfway point of the race.

My legs are getting heavy. "It's that damn lactic acid building up," I think. I notice a twinge on the outside of my left knee. It's like an old friend. It will stay with me for the rest of the race. I am comforted knowing that some things are constant. I try to remember if I took my aspirin this morning. It doesn't feel like it. I wonder if I am taking "the right" dose to keep those little platelets lubricated just right. I should talk to someone about it.

I notice that I am almost completely up the hill with almost no effort. As my mind was occupied, my body just continued to do the race. I wonder about the wisdom of the body, how it knows what to do while "I" am somewhere else. How much more does my body know than I give it credit for? I wonder how I could use that in my work. I burst through the birds again. This time several of them give me a wide berth. They somehow sense a new power in my stride.

I am passed as if standing still by a young girl listening to her Walkman. She appears totally oblivious to everything. "Wait a minute," I think, "don't you know who you are passing? Don't you know how hard I've trained for the race? Whatever happened to re-

continued on page 138

Bounds, Poger & O'Donnell will help you reach your destination.

KNOWING PHYSICIANS
PERSONAL ATTENTION
INNOVATIVE ALTERNATIVES
TIMELY ADVICE
PRACTICAL SOLUTIONS

At Bounds, Poger & O'Donnell, we can help you reach your destination with innovative and creative solutions tailored to meet your practice's needs.

It's our business to know your practice. Our goal is to help your practice run on-course and in the right direction.

Our Physician Advisory Group has worked with physicians in solving both personal and practice problems in a variety of areas including practice management, personal financial consulting, third party reimbursement, office automation, tax planning and accounting.

Put our practical, hands-on experience with physicians and our in-depth technical and business experience to work for you.

For a checklist on how to reach your destination, call Jim Bonebrake, of our Physician Advisory Group, at 314-727-1111.

BOUNDS, POGER & O'DONNELL
CERTIFIED PUBLIC ACCOUNTANTS/BUSINESS ADVISORS

120 SOUTH CENTRAL AVE., ST. LOUIS, MISSOURI 63105, (314) 727-1111

MISSOURI STATE MEDICAL ASSOCIATION AUXILIARY

1989 FUND RAISER

PINEAPPLE PIZZAZZ and ST. LOUIS JAZZ

Donate today to AMA-ERF (please designate the school of your choice and whether you prefer the medical excellence or student assistance fund) or the Missouri State Medical Foundation (which provides low interest loans to Missourians attending any AMA-accredited medical school). The suggested gift to either is $100. Send contributions to one of our co-chairmen:

Jan Meyer (Jerry)
302 Sunset Hill Dr.
Concordia, MO 64020

Audrey Pavlu (Robert)
1200 Hillcrest Drive
Carrollton, MO 64623

All contributors to this special fundraiser between January 1-April 13, 1989, will be recognized with a "pizzazz & jazz" badge to wear to the Presidents' Thank You Reception. This elegant event will be held during our annual convention on Thursday, April 13, 1989 from 6:00-8:00 p.m. at the Marriott Pavilion, St. Louis. Entertainment will be provided by "The Jazz Incredibles" of St. Louis.

Make a difference in the future of medicine. Send in your contribution today, then meet us in St. Louis for Pineapple Pizzazz and St. Louis Jazz!

THE LOWER RESPIRATORY TRACT—
More vulnerable to infection in smokers and older adults

THE
LITTLE GARAGE

Experience counts

Ceclor® Pulvules® 250 mg
cefaclor

think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics It must be considered in differential diagnosis of antibiotic-associated diarrhea Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms
- Positive direct Coombs' tests have been reported during treatment with cephalosporins
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea). 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor No serious sequelae have been reported Antihistamines and corticosteroids appear to enhance resolution of the syndrome
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported
- Other: eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis, elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly) [061088L]

Additional information available from
Eli Lilly and Company, Indianapolis, Indiana 46285
PV 2351 AMP

Lilly
Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

© 1988, ELI LILLY AND COMPANY
CR-5012-B-849345

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

Although your name will not be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.

Dear Dr. Woerth,

My staff is very reluctant to ask patients for payment of or toward their medical bill. Consequently, I have a less-than-desirable collection rate. Have you any suggestions that might help me with this situation?

Dr. D.F.

Dear Dr. D.F.,

Collecting fees is a difficult area for many medical offices. In order for staff to be effective at fee collections, a precise policy for collecting fees needs to be established. This policy needs to be communicated to all staff members and adhered to by all staff, including the doctor.

I suggest that you meet with your staff to learn why they are reluctant to ask patients for payments. Once your staff can pinpoint their problems in asking for payments, talk through methods of dealing with these specific problems. I often have staff members role-play asking a patient for payment. We try to role-play the difficult problems that staff might encounter e.g., the patient who acts insulted when asked for payment, the patient who wants to be billed but is slow in paying his/her bill, etc.. By developing a script, be it mental or written, for dealing with these potential collection problems, the staff becomes better prepared and confident in asking for payments.

Dear Dr. Woerth,

I have received claim forms from Medicare and other third party payers that have denied or reduced payment because the procedures were deemed "medically unnecessary". I assume my problem is a communication/coding problem because the procedures that I performed were indeed necessary. Is there anything I can do about this dilemma?

Dr. T.D.

Dear Dr. T.D..

You are correct in assuming that claims returned as "medically unnecessary" can be the result of communication/coding problems. I find when analyzing denied claims that too frequently not enough diagnostic codes have been used to fully establish medical necessity for the procedure completed. I believe the following example will help.

A patient experiencing phantom pain of the forearm which had been amputated, received spinal surgery to eliminate the pain. A claim form with the diagnosis of "pain in limb (forearm)" was sent to the insurance company with the correct surgical code (CPT) for the procedure completed. Payment was denied; the procedure was determined "medially unnecessary". A review of the claim revealed a diagnosis code for the amputated left forearm was omitted and the diagnostic code for phantom limb syndrome was not used. The insurance company cannot assume the cause of the patient's limb pain. It must be coded. Forearm pain by itself does not warrant surgery, thus the claim denial.

When coding diagnoses, the claim needs to include the principle diagnosis (the acute reason for which the patient was seen in the office), any secondary diagnoses, comorbidities that effect the treatment of the principle diagnosis, e.g., diabetes mellitus, cancer, and complications, e.g., allergic reaction to medication or personal/family history of illness/condition, that effect treatment of the principle diagnosis.

Intervention Training in the Health Professions

Sponsored by
The Missouri State Medical
Association
and
The Missouri Physicians'
Health Program

Friday, April 14, 1989
1:00 - 4:00 p.m.
Marriott Pavilion, St. Louis

Editor's Desk

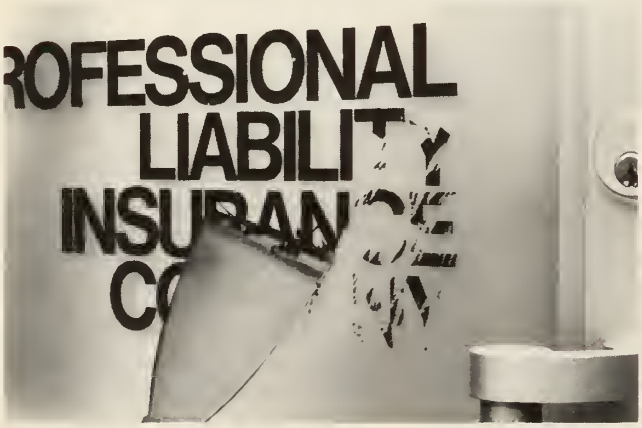
continued from page 133

spect?" But she is gone, running a different race. I quickly forget her. At her age what does she know of the race?

I pick up the pace, smoothly passing two housewives having an animated discussion. "Eat your heart out ladies," I think smugly. I turn on the afterburners and glide across the finish line arms outstretched. No one cheers. I don't care. I have won the race. I am tired but excited. My endorphins are off scale.

My watch tells me that despite my early triumph that it is time to go to the next race. As the time goes by there seems to be an increasing number of races. Each is more important than the one before. I wonder what this racing is all about--for us doctors, for us Americans, for us humans. What is the prize for winning the race? Is there another way to live life? Occasionally, on an especially clear day, I get a glimpse of who I am racing against.

In ten years your malpractice carrier may be just a memory.



Unless it's Medical Protective.

The most important thing an insurance company sells is its promise to be here when you need help. Unfortunately, that's a promise that's easy to make, but hard to keep.

When you consider liability insurance, remember this. A company that's survived tough times before is more likely to come through a crisis period. And no company has weathered more of the industry's tough times than The Medical Protective Company because we pioneered professional liability coverage nearly a century ago.

For more information contact your Medical Protective Company general agent. He'll be here when you need him.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Ralph E. Borgmann, Philip E. Moppert
Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400

Thomas E. Meierant, Gregory Sherar
Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

GUEST EDITORIAL

by Wilfred E. Wooldridge, M.D.

I'm Afraid of What Might Be Out There!

For the past several years I have read of powerful scientific attempts to probe the universe for signs of life. Those attempts are now being intensified.

I am not at all comfortable about the wisdom of this. Certainly, most efforts to advance science seem commendable because all sorts of beneficial and unexpected fall-out to humanity comes along with fresh knowledge. But, this one?

We know the depth of space seems limitless and, scattered through it, are suns with their own planetary systems far greater than our own. Therefore, it seems impudent to assume that intelligent life has evolved only on our puny planet. Also, since science on earth is still in the diaper stage, it is very easy for me to believe that life elsewhere has advanced to a level far beyond our own. That is disturbing because I am really not interested in being discovered by someone, or something, who, or which, considers me little better than an amoeba. Not too remote a possibility!

This idea is not new. In the early years of the twentieth century, H.G. Wells' fertile imagination produced "War Of The Worlds". In that story the invaders were scientifically far ahead of us, but fell prey to our microorganisms and were wiped out in short order.

It is quite as easy to think otherwise. Let us assume that we beam into space "2 plus 2=4" and, years later, receive the cryptic reply that 2 plus 2 not only equals four, but also, the square of 46 equals 2116. That's when the trouble begins!

Whoever, or whatever, formulated that reply is capable of rational thought and, if that far along, how much further? There is an overwhelming probability that civilization is far ahead of our own, at that point we have stupidly told them we are here, and that Earth is capable of sustaining life; the very thing they want to know.It may also be that trans-stellar travel poses no problem to those beings. They just didn't know where to go, and we thoughtlessly supplied that information. I can imagine the joy in those quarters, "Sergeant, we've found them! Go below and tell the men to crank up the engines."

That is really the thought behind H.G. Wells' story. On that fateful night when Orson Wells broadcasted "War Of The Worlds" it was no laughing matter. Our telephone system was overwhelmed, people are amuck in the streets and frantic traffic jams killed numbers of citizens. And that was only a radio program!

It is frightening enough to think we are developing capability to prowl our own planetary system, but at least we feel secure that, whatever we conceive life to be, it does not exist in our own solar system and it is unlikely we could survive on Mercury or Jupiter without being either fried or frozen solid by stepping outside to the bathroom. But is not hard for me to believe that beings do exist in some distant solar system who would be tough nuts indeed, and that they would be simply delighted to know where we are. Maybe we should think a little more about this one!

On that fateful night when Orson Wells broadcasted "War Of The Worlds" it was no laughing matter.

WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, PIE Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality. PIE Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

Physician Managing Boards, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

Quality Rated Insurance Program: a modified claims-made plan which works in the physician's favor to reward loss-free physicians and provides added protection not available in other policies.

A Financially Sound Reinsurance Program with Lloyd's of London, the world's most prestigious reinsurer.

An Aggressive Defense Team, experienced in all types of medical liability claims and willing to fight for your cause.

If your standards match ours, let's talk business.

The PIE Mutual Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth St., Cleveland, OH 44114
(216) 781-1087

SO WE CAN HOLD THE PREMIUMS DOWN.

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

FINANCIAL STATEMENT FOR THE YEAR 1988

John P. Rucker
CERTIFIED PUBLIC ACCOUNTANT

o the Council of the
issouri State Medical Association

have examined the financial statements of Missouri State Medical ssociation for the year ended December 31, 1988, and have issued my eport thereon dated January 20, 1989. As part of my examination, I ade a study and evaluation of the Association's system of internal ccounting control to the extent I considered necessary to evaluate he system as required by generally accepted auditing standards. The urpose of my study and evaluation was to determine the nature, iming, and extent of the auditing procedures necessary for xpressing an opinion on the company's financial statements. My tudy and evaluation was more limited than would be necessary to xpress an opinion on the system of internal accounting control taken s a whole.

he management of Missouri State Medical Association is responsible or establishing and maintaining a system of internal accounting ontrol. In fulfilling this responsibility, estimates and judgements y management are required to assess the expected benefits and elated costs of control procedures. The objectives of a system are o provide management with reasonable, but not absolute, assurance hat assets are safeguarded against loss from unauthorized use or isposition, and that transactions are executed in accordance with anagement's authorization and recorded properly to permit the reparation of financial statements in accordance with generally ccepted accounting principles.

ecause of inherent limitations in any system of internal accounting ontrol, errors or irregularities may nevertheless occur and not be etected. Also, projection of any evaluation of the system to future eriods is subject to the risk that procedures may become inadequate ecause of changes in conditions or that the degree of compliance ith procedures may deteriorate.

y study and evaluation made for the limited purpose described in the irst paragraph would not necessarily disclose all material eaknesses in the system. Accordingly, I do not express an opinion n the Association's system of internal accounting control taken as a whole. However, my study and evaluation disclosed the following condition that I believe results in more than a relatively low risk that errors or irregularities in amounts that would be material in relation to the financial statements of the Missouri State Medical Association may occur and not be detected within a timely period.

Segregation of Duties

One person handles most of the cash receipts functions within the Association. As a result, most of the aspects of internal accounting control in the cash receipts system which rely upon an adequate segregation of duties are for all practical purposes, missing in your Association.

This condition was considered in determining the nature, timing, and extent of the audit tests to be applied in our examination of the 1988 financial statements, and this report does not affect my report on these financial statements dated January 20, 1989.

This report is intended solely for the use of the management and should not be used for any other purpose.

John P. Rucker
John P. Rucker
Certified Public Accountant

January 20, 1989

C O N T E N T S

Page

REPORT OF CERTIFIED PUBLIC ACCOUNTANT ON THE FINANCIAL STATEMENTS 1 and 2

FINANCIAL STATEMENTS

Balance sheets 3
Statements of revenues and expenses 4 and 5
Statements of changes in members' equity 6
Notes to financial statements 7 thru 15

ACCOMPANYING INFORMATION

Schedules of selected expenses 16 and 17

John P. Rucker
CERTIFIED PUBLIC ACCOUNTANT

To the Council of the
Missouri State Medical Association:

I have audited the accompanying balance sheets of the Missouri State Medical Association as of December 31, 1988 and 1987, and the related statements of revenues and expenses and changes in members' equity for the years then ended. These financial statements are the responsibility of the Association's management. My responsibility is to express an opinion on these financial statements based on my audits. I did not examine the financial statements of Missouri Medical Insurance Company, an unconsolidated affiliate, the investment in which, as discussed in Note 5 of the Notes to Financial Statements, is accounted for by the equity method of accounting. The investment in Missouri Medical Insurance Company for 1987 and 1986 (latest available reports) were examined by other auditors whose reports have been furnished to me, and my opinion expressed herein, in so far as it relates to the amounts included for Missouri State Medical Association, is based solely on the reports of the other auditors.

The opinion of the other auditors, referred to in the preceding paragraph, was qualified subject to their inability to evaluate the reasonableness of the estimated reserve for losses and loss adjustment expenses due to the insufficient historical claims experience of Missouri Medical Insurance Company. Additional losses ultimately realized, if any, will affect the carrying value of the Association's investment in the Missouri Medical Insurance Company.

I conducted my audits in accordance with generally accepted auditing standards. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. I believe that my audits and the report of other auditors provide a reasonable basis for my opinion.

In my opinion, based on my audits and the reports of the other auditors referred to above, and subject to the effects, if any, on the financial statements of the ultimate resolution of the matter referred to in the preceding paragraph, the financial statements referred to in the first paragraph present fairly, in all material respects, the financial position of Missouri State Medical Association as of December 31, 1988 and 1987, and the results of their operation for the years then ended, in conformity with generally accepted accounting principles.

My audits were made for the purpose of forming an opinion on the basic financal statements taken as a whole. The schedule of selected expenses for the years ended December 31, 1988 and 1987 is presented for purposes of additional analysis and is not a required part of the basic financial statements.

Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in my opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

John P. Rucker
John P. Rucker
Certified Public Accountant

January 20, 1989

MISSOURI STATE MEDICAL ASSOCIATION

BALANCE SHEETS
December 31, 1988 and 1987

ASSETS	1988	1987
CURRENT ASSETS		
Cash and cash investments (Note 2)	$1,091,275	$ 893,048
Marketable securities (Note 3)	481,109	219,711
Accounts receivable	20,535	24,958
Other current assets	10,135	6,581
Total current assets	1,603,054	1,144,298
INVESTMENTS AND LONG-TERM RECEIVABLE		
Common stock of MSMI, Inc., a 100% owned unconsolidated subsidiary, at cost plus equity in undistributed net income (Note 4)	21,774	22,483
Common stock of Missouri Medical Insurance Company, a 10.8% owned affiliate, at cost plus equity in undistributed net income (Note 5)	- 0 -	- 0 -
Note receivable from affiliate (Note 6)	100,000	100,000
Total investments and long-term receivables	121,774	122,483
LAND, BUILDING AND EQUIPMENT (Note 7)	366,194	273,032
OTHER ASSETS, cash surrender value	31,622	25,182
	$2,122,644	$1,564,995

The Notes to Financial Statements are an integral part of these statements.

LIABILITIES AND MEMBERS' EQUITY	1988	1987
CURRENT LIABILITIES		
Accounts payable and accrued expenses	$ 7,752	$ 12,002
Due to the American Medical Association	202,480	99,086
Due to County Medical Societies	12,392	13,751
Deferred revenue	231,125	130,700
Total current liabilities	453,749	255,539
SUBORDINATED NOTES PAYABLE (Note 8)	590,781	590,781
DEFERRED COMPENSATION (Notes 9)	36,009	30,457
Total liabilities	1,080,539	876,777
MEMBERS' EQUITY	1,042,105	688,218
	$2,122,644	$1,564,995

MISSOURI STATE MEDICAL ASSOCIATION

STATEMENTS OF REVENUES AND EXPENSES
Years Ended December 31, 1988 and 1987

	1988	1987
REVENUES		
Dues	$1,268,989	$1,307,236
Subscriptions	17,519	20,856
Exhibit rentals	28,100	18,000
Advertising	62,721	72,835
Commissions on collections	22,263	23,134
Investment income (Note 10)	137,020	50,818
Administrative fees and office rent (Note 11)	36,792	38,288
Seminars and workshops	48,323	46,183
Physicians Rehab Program (Note 12)	20,904	120,061
Other revenues	10,971	7,082
Total Revenues	1,653,602	1,704,493
EXPENSES		
Salaries & fringe benefits (Note 13)	496,521	441,921
Office expenses	87,749	80,271
Travel expense	10,003	6,741
Commissions & committee expense	37,781	22,532
Depreciation	25,322	36,274
Women's Auxiliary	8,508	8,417
Journal expense	140,358	133,356
Meeting expense	188,509	169,570
Public affairs	30,235	40,504
Telenet system	3,791	3,002
Consultant & professional fees	42,055	40,580
Public relations program	30,247	18,604
Student awards	1,200	1,200
Tort Reform	14,542	20,740
Miscellaneous	15,185	19,054
Seminars and workshops	47,348	37,232
Physicians Rehab Program (Note 12)	127,750	132,652
Contribution to the Missouri State Medical Foundation (Note 11)	- 0 -	25,000
HMO feasibility study	- 0 -	37,836
Equipment purchases	13,582	3,189
Planning & remodeling	96,804	7,707
	1,417,490	1,286,382
Less capitalized expenditures	(118,484)	(11,981)
Total expenses	1,299,006	1,274,401

The Notes to Financial Statements are an integral part of these statements.

MISSOURI STATE MEDICAL ASSOCIATION

STATEMENTS OF REVENUES AND EXPENSES (Continued)
Years Ended December 31, 1988 and 1987

	1988	1987
Excess (deficiency) of revenues over expenses before equity in net income of investments	$354,596	$430,092
Equity in net income (loss) of MSMI, Inc. (Note 4)	(709)	2,005
Equity in net income (loss) of Missouri Medical Insurance Company (Note 5)	- 0 -	(322,775)
Excess (deficiency) of revenues over expenses	$353,887	$109,322

The Notes to Financial Statements are an integral part of these statements.

MISSOURI STATE MEDICAL ASSOCIATION

STATEMENTS OF CHANGES IN MEMBERS' EQUITY
Years Ended December 31, 1988 and 1987

	1988	1987
Members' equity, beginning, as restated	$ 688,218	$578,896
Excess (deficiency) of revenues over expenses	353,887	109,322
Members' equity, ending	$1,042,105	$688,218

The Notes to Financial Statements are an integral part of these statements.

MISSOURI STATE MEDICAL ASSOCIATION

NOTES TO FINANCIAL STATEMENTS

Note 1. Significant Accounting Policies

Dues:

Dues are assessed to members on a calendar year basis. On December 31 of each year, members delinquent in payment of dues forfeit their memberships. The Association may also collect from members, dues and assessments of the American Medical Association and County Medical Societies, which are then forwarded to the respective organizations by the Association. The Association receives a fee for providing this service. Amounts received from members prior to January 1 of each year, which represents the subsequent years dues are recorded as deferred revenue.

Valuation of accounts receivable:

Accounts receivable are stated at face amount with no allowance for doubtful accounts. An allowance for doubtful accounts is not considered necessary because probable uncollectible accounts are immaterial.

Income Taxes:

The Association is exempt from federal income taxes under the Internal Revenue Code Section 501(c)(6). Any unrelated business income is subject to income tax.

Property and equipment:

Property and equipment are carried at cost. Depreciation is computed by the straight-line method based on estimated useful lives of the related assets.

Reclassifications:

Certain reclassifications have been made to conform to the 1987 presentation.

Note 2. Cash and cash investments

The balance of cash and cash investments consisted of the following at December 31:

	1988	1987
Petty cash	$ 50	$ 50
Cash in bank, Executive Secretary Account	2,359	1,131
Cash in bank, Treasury Account	26,535	214,067

MISSOURI STATE MEDICAL ASSOCIATION

NOTES TO FINANCIAL STATEMENTS

Note 2. Cash and cash investments (Continued)

	1988	1987
Cash in bank, Physicians Rehab Program	- 0 -	3,497
Money Market Fund	47,204	103,443
Certificates of deposit	1,015,127	570,860
	$1,091,275	$893,048

Note 3. Marketable Securities

Investments in marketable equity securities are carried at the lower of aggregate cost or market at the balance sheet date.

To increase or decrease the carrying amount of the marketable equity securities portfolio to aggregate cost or market at December 31, 1988, a valuation allowance was established with a corresponding charge or (credit) to income.

The following is a summary of marketable equity securities at December 31:

	1988	1987
Aggregate cost	$481,109	$251,458
Aggregate market	522,087	219,711
Unrealized gain (loss)	40,978	(31,747)
Valuation allowance, beginning	(31,747)	- 0 -
Charge (credit) to operations	(31,747)	31,747
Valuation allowance, ending	- 0 -	31,747

Net realized gain of $5,989 and $16 on the sale of marketable equity securities were included in revenue for the years ended December 31, 1988 and 1987, respectively.

Note 4. Investment in Unconsolidated Subsidiary

The Association's investment in MSMI, Inc., a 100% owned unconsolidated subsidiary, is carried at cost ($2,000) plus equity in the undistributed net earnings since the date of acquisition. At December 31, 1988 and 1987, the investment in the subsidiary is carried at $21,774 and $22,483, respectively.

MISSOURI STATE MEDICAL ASSOCIATION

NOTES TO FINANCIAL STATEMENTS

Note 4. Investment in Unconsolidated Subsidiary (Continued)

Condensed financial data relating to the subsidiary follows:

For the years ended December 31

	1988	1987
Net current assets	$ 6,774	$ 7,943
Other assets (investments in common stock of Missouri Medical Insurance Company)	15,000	15,000
Less Liabilities	- 0 -	(460)
Net assets	$21,774	$22,483
Income	$ 2,767	$ 4,679
Expenses	4,283	(2,214)
	(1,516)	(2,539)
Income taxes	807	(460)
Net income (loss)	$ (709)	$ 2,005
Dividends paid to the Association	$ - 0 -	$ - 0 -

Note 5. Investment in Affiliate

The Association exercises significant management control over its affiliate, Missouri Medical Insurance Company (MOMEDICO), by virtue of its ownership of 61.3% of the voting rights of the Company. At December 31, 1986 and 1985, the Association owned 10.8% of the outstanding common stock of its affiliate. The Association's investment in MOMEDICO is carried at cost, plus equity in undistributed net earnings since the date of acquisition. At December 31, 1987 and 1986, the investment in the affiliate is carried at $-0- and $-0-, respectively.

Condensed financial data relating to the subsidiary follows:

Note 5. Investment in Affiliate (Continued)

For the years ended December 31

	1987	1986
Investments	$26,884,561	$21,152,253
Other assets	2,401,768	1,369,748
Total assets	29,286,329	22,522,001
Reserve for losses & loss adjustment expense	24,794,281	20,993,288
Other liabilities	7,012,487	4,011,562
Total liabilities	31,806,768	25,004,850
Revenues	12,292,020	8,683,547
Expenses	12,291,997	12,827,224
	23	(4,143,677)
Realized gains (losses) on investments	(23)	160,023
Net income (loss)	$ - 0 -	$(3,983,654)

Note 6. Note Receivable From Affiliate

On July 10, 1985, the Association advanced $100,000 to its affiliate, MOMEDICO and received an unsecured convertible subordinated note in the principal sum of $100,000. The note was exchanged June 30, 1988 for note #2. This note bears interest at 1% over Boatmen's Bankshares prime, St. Louis. Payment is subject to approval by the MO Division of Insurance.

Repayment of the note will be made in 1989 if MOMEDICO, as calculated at June 30, 1989 and in accordance with accounting principals prescribed or permitted by the Division of Insurance of the State of Missouri, has a minimum capital and surplus of $2,000,000. Principal payments on the outstanding notes will be made only to the extent that the capital and surplus exceeds $2,000,000 minimum. At this time, the Association has the option of accepting shares of Class A, common stock for 10% less than the mean of the bid and asked market price. However, MOMEDICO may decline such a conversion in the event that less than 150,000 shares are requested for conversion by the note holders. Payments thereafter on nonconverted notes will only be to the extent that the capital and surplus of

Note 6. Note Receivable From Affiliate (Continued)

MOMEDICO, calculated as previously disclosed and at the end of each fiscal year, exceeds the $2,000,000 minimum.

Note 7. Land, Building and Equipment

Land, building and equipment consists of the following at December 31:

	1988	1987
Land	$ 83,000	$ 83,000
Buildings	335,159	238,355
Furniture and equipment	187,221	165,541
	605,380	486,896
Less accumulated depreciation	239,186	213,864
	$366,194	$273,032

Note 8. Subordinated Notes Payable

In 1978, the Association formed a wholly owned subsidiary, MOMEDICO to provide professional liability and premises liability insurance for physicians and support technicians practicing in the State of Missouri. Before obtaining professional liability insurance through MOMEDICO, physicians residing in the State of Missouri were required to subscribe to non-interest bearing subordinated notes based upon the physician's underwriting classification. These notes were issued by the Association and the subscriptions were payable over a three year period.

The Association was the sole stockholder of MOMEDICO prior to public stock offering of MOMEDICO in 1980. At that time, the requirement to purchase subordinated notes was eliminated with new policies effective after January 31, 1980.

In connection with the public stock offering in 1980, MOMEDICO assumed, in exchange for 100,815 of the 125,000 shares of the Class B common stock the Association held in MOMEDICO, the face value of the subordinated notes issued and outstanding. MOMEDICO also assumed the balance of the installments receivable on the subordinated notes and a bank note payable from the Association. Under an exchange offer made by MOMEDICO, holders of the Association's subordinated note could exchange fully paid notes for Class A common stock at the rate of $20 face value per share.

On October 15, 1980, the Association reassumed all notes not exchanged and also the installments receivable on the unexchanged notes as well as an amount equal to the installments receivable of the bank note payable.

Note 8. Subordinated Notes Payable (Continued)

The notes require repayment, only upon the Association's accumulation of in excess of $3,000,000 of members' equity at the end of any calendar year, that the Association has sufficient funds and assets, exclusive of the amount subject to repayment, to permit it to carry on business, and that the repayment be approved by the Council of the Association. Interest may be paid on the notes, but it is at the discretion of the Council of the Association.

Redemption of the notes are provided for in the event of death, disability, retirement of the holder, or if the holder has moved both his person and his practice out of the State of Missouri. However, redemption for such causes may be delayed or refused if the Council determines the Association is not on a financially reasonable basis to make such redemptions.

At December 31, 1988 and 1987, the balance of the subordinated notes payable was $590,781. This amount reflects the face value of the notes reassumed by the Association on October 15, 1980, less the installments receivable on the outstanding notes, and less all redemptions made from 1981 through 1985. In 1985, the Council of the Association placed a moratorium on the redemption of the subordinated notes.

Note 9. Deffered Compensation Plan

The Association has a deffered compensation plan agreement with its Executive Vice-President providing for payments upon retirement, death or disability. The plan agreement also stipulates that a pro-rata settlement of benefits will be made in the event of voluntary termination of employment with the Association.

At December 31, 1988 and 1987, the Association's liability under the terms of the plan were $36,009 and $30,457, respectively.

Note 10. Investment Income

The following is a summary of investment income for the years ended December 31:

Note 10. Investment Income (Continued)

	1988	1987
Interest on cash investments	$ 83,785	$ 60,682
Interest on notes receivable	10,000	10,000
Dividends	5,499	11,867
Realized gain or (loss) on the sale of marketable equity securities	5,989	16
Appreciation or (loss) on the valuation of marketable equity securities	31,747	(31,747)
Total	$137,020	$ 50,818

Note 11. Related Party Transactions

The Association provides administrative services to MSMI, Inc. (a wholly owned subsidiary) and Missouri State Medical Foundation (an affiliate). For providing these services, the Association receives an annual fee from each of the two organizations. For the years ended December 31, 1988 and 1987, the administrative fee assessed Missouri State Medical Foundation was $10,000 each year and the administrative fee assessed MSMI, Inc. was $- 0 - and $3,000, respectively.

For the year ended December 31, 1988, the Association had an additional amount due of $4,358 from the Foundation for reimbursed expenses.

The Association continued its financial support of the Foundation by contributing $25,000 to the Foundation in 1987. No contribution was paid in 1988.

The Association during 1988 and 1987, also provided office space, office furniture and office services for its affiliate, MOMEDICO. In exchange for providing these services, the Association assesses a monthly fee. For the years ended December 31, 1988 and 1987 these were $15,900.

Note 12. Physicians Rehabilitation Program

During 1986, the Association established a Physicians Rehabilitation Program (PRP), the purpose of which is to

Note 12. Physicians Rehabilitation Program (Continued)

motivate impaired physicians to voluntarily enter treatment and to provide such a treatment program.

Funding for the program is to be provided by fees assessed to participants as well as from donations received from supportive individuals and organizations.

The following is a summary of the program's revenue and expenses for the year ended December 31, 1988.

	1988	1987
Revenue:		
Participant fees	$ (396)	$ 50,186
Donations	21,300	69,875
Total revenues	$20,904	$120,061
Expenses:		
Medical director - contracted salary	$ 54,167	$ 50,000
Salary - coordinator and administrative assistant	40,687	19,906
Office expense	9,308	13,380
Secretarial services and office supplies	844	4,834
Publications	530	1,043
Travel	10,668	17,888
Legal and consulting fees	1,845	1,801
PHC committee	329	913
Educational/activities	- 0 -	753
Facility expense	272	1,100
Lab fees	6,300	7,980
Counselor services	2,800	13,054
Total expenses	$127,750	$132,652

Note 13. Pension Plan

The Association has a non-contributory defined benefit pension plan covering substantially all of its employees. As of March 31, 1988, the Plan was fully funded with no unfunded accrued liability.

Note 13. Pension Plan (Continued)

A comparison of the actuarial present value of accumulated plan benefits and net assets available for benefits for the plan year ended March 31, is as follows:

	1988	1987
Vested	$413,603	$373,488
Nonvested	2,259	2,298
Total	$415,862	$375,786
Net assets available for benefits	$508,730	$529,830

The average assumed rate of return used in determining the actuarial present value of accumulated plan benefits was 8% for both 1987 and 1988.

The total pension contributions for years ended December 31, 1988 and 1987 were $10,000 and $-0-, respectively.

SCHEDULE OF SELECTED EXPENSES
December 31, 1988 and 1987

	1988	1987
SALARIES AND FRINGE BENEFITS		
Salaries	$420,199	$378,425
Payroll taxes	29,123	28,097
Employees life & disability insurance	8,713	6,772
Employees hospitalization insurance	24,374	23,261
Employees pension plan contribution	10,000	- 0 -
Deferred compensation plan expense	4,112	5,366
Total salaries and fringe benefits	$496,521	$441,921
OFFICE EXPENSES		
Occupancy expense	$ 11,952	$ 10,518
Office supplies	10,971	13,997
Computer expense	17,201	10,724
Postage	18,684	16,862
Telephone	12,936	10,604
Insurance	4,393	5,771
Taxes, real estate	2,850	1,940
Custodian fees	2,141	2,602
Equipment rental and repair	3,456	3,490
Dues and directories	3,165	3,763
Total office expenses	$ 87,749	$ 80,271
COMMISSIONS AND COMMITTEES EXPENSES		
Commissions:		
Commission on Medical Economics, Third Party Medicine and Governmental Relations	$ 326	$ 178
Commission on Continuing Medical Education	520	1,639
Commission on Medical - Legal Affairs	- 0 -	113
Total commissions expenses	846	1,930

SCHEDULE OF SELECTED EXPENSES (Continued)
December 31, 1988 and 1987

	1988	1987
COMMISSIONS AND COMMITTEES EXPENSES (Continued)		
Committees:		
Committee on Public Affairs	- 0 -	209
Committee on Planning	257	20,393
Committee on Legislative Affairs	122	- 0 -
Medicaid Project	29,868	- 0 -
Medassist	5,047	- 0 -
Medicare Voluntary Acceptance	1,641	- 0 -
Total committee expenses	36,935	20,602
Total commissions & committee expenses	$ 37,781	$ 22,532
MEETING EXPENSES		
Meetings:		
Annual session	$ 73,911	$ 76,328
Council	56,742	40,227
AMA delegate's expenses	50,258	43,296
Discretionary Council Fund	1,725	1,923
Hospital medical staff	5,873	7,796
Total meeting expenses	$188,509	$169,570

FINANCIAL STATEMENT
MISSOURI STATE MEDICAL FOUNDATION
DECEMBER 31, 1988

John P. Rucker
CERTIFIED PUBLIC ACCOUNTANT

To the Board of Directors of
Missouri State Medical Foundation

I have examined the financial statements of Missouri State Medical Foundation for the years ended December 31, 1988 and 1987, and have issued my report thereon dated January 20, 1989. As a part of my examination, I made a study and evaluation of the Foundation's system of internal accounting control to the extent I considered necessary to evaluate the system as required by generally accepted auditing standards. The purpose of my study and evaluation was to determine the nature, timing, and extent of the auditing procedures necessary for expressing an opinion on the Foundation's financial statements. My study and evaluation was more limited than would be necessary to express an opinion on the system of internal accounting control taken as a whole.

The management of Missouri State Medical Foundation is responsible for establishing and maintaining a system of internal accounting control. In fulfilling this responsibility, estimates and judgements by management are required to assess the expected benefits and related costs of control procedures. The objectives of a system are to provide management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of financial statements in accordance with generally accepted accounting principles.

Because of inherent limitations in any system of internal accounting control, errors or irregularities may nevertheless occur and not be detected. Also, projection of any evaluation of the system to future periods is subject to the risk that procedures may become inadequate because of changes in conditions or that the degree of compliance with the procedures may deteriorate.

My study and evaluation made for the limited purpose described in the first paragraph would not necessarily disclose all material weaknesses in the system. Accordingly, I do not express an opinion on the Foundation's system of internal accounting control taken as a whole. However, my study and evaluation disclosed no condition that I believe to be a material weakness.

This report is intended solely for the use of management and should not be used for any other purpose.

John P. Rucker
John P. Rucker
Certified Public Accountant

January 20, 1989

2009 EAST MCCARTY
JEFFERSON CITY, MO 65101
(314) 635-3543

RES 1111 MOREAU DR
JEFFERSON CITY, MO 65101
(314) 635-3544

CONTENTS

Page

REPORT OF CERTIFIED PUBLIC ACCOUNTANT ON THE FINANCIAL STATEMENTS 1

FINANCIAL STATEMENTS

- Statements of assets, liabilities and fund balance 2
- Statements of revenues, expenses, and changes in fund balance 3
- Notes to financial statements 4 and 5

John P. Rucker
CERTIFIED PUBLIC ACCOUNTANT

To the Board of Directors of
Missouri State Medical Foundation

I have audited the accompanying statements of assets, liabilities and fund balance on a modified cash basis of Missouri State Medical Foundation as of December 31, 1988 and 1987, and the related statements of revenues, expenses and changes in fund balance for the years then ended. These financial statements are the responsibility of the Foundation's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. I believe that my audits provide a reasonable basis for my opinion.

As described in Note 1 of the notes to financial statements, the accompanying statements are prepared on the modified cash basis of accounting and, accordingly, are not intended to be presented in conformity with generally accepted accounting principles.

In my opinion, the financial statements mentioned above present fairly the assets and fund balance of the Missouri State Medical Foundation as of December 31, 1988 and 1987, and its revenues, expenses, and changes in fund balances for the years then ended, in conformity with the Foundation's modified cash basis of accounting policy, as described in Note 1 of the notes to financial statements.

John P. Rucker
John P. Rucker
Certified Public Accountant

January 20, 1989

MISSOURI STATE MEDICAL FOUNDATION

STATEMENTS OF ASSETS, LIABILITIES AND FUND BALANCE
(Modified Cash Basis)
December 31, 1988 and 1987

ASSETS

	1988	1987
Cash	$ 682,947	$ 479,175
Loans receivable, less allowance for doubtful accounts of $38,683 and $40,807 (Note 2)	1,250,741	1,319,429
Equipment, less accumulated depreciation of $3,827 and $2,551	2,551	3,827
	$1,936,239	$1,802,431

LIABILITIES AND FUND BALANCE

	1988	1987
Accounts Payable	$ 4,358	$ - 0 -
Fund Balance	1,931,881	1,802,431
	$1,936,239	$1,802,431

The Notes to Financial Statements are an integral part of these statements.

MISSOURI STATE MEDICAL FOUNDATION

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN FUND BALANCE
(Modified Cash Basis)
Years Ended December 31, 1988 and 1987

	1988	1987
REVENUES		
Interest on student loans	$ 105,847	$ 101,830
Interest on cash investments	34,467	22,764
Contributions (Note 3)	6,294	32,567
Other	927	1,699
Total Revenues	147,535	158,860
EXPENSES		
Administrative (Note 3)	10,000	10,000
Professional (Note 3)	2,654	2,692
Printing and meeting expense (Note 3)	1,704	3,037
Provision for loan losses (Note 2)	2,297	(783)
Miscellaneous	154	197
Depreciation	1,276	1,275
Total expenses	18,085	16,418
Excess revenues over expenses	129,450	142,442
Fund balance, beginning	1,802,431	1,659,989
Fund balance, ending	$1,931,881	$1,802,431

Notes to Financial Statements are an integral part of these statements.

MISSOURI STATE MEDICAL FOUNDATION

NOTES TO FINANCIAL STATEMENTS

Note 1. Significant Accounting Policies

Method of accounting:

The accounts are maintained and these statements are presented, on a modified cash basis under which, except for the recognition of the assets and liabilities shown on the statement of assets, liabilities and fund balance on a modified cash basis, only cash receipts and disbursements are recorded and reflected in these statements. Since accrued interest on loans receivable and receivables which may be material in amount, are not reflected, the financial statements are not intended to present the overall financial position and results of operations in conformity with generally accepted accounting principles. However, the individual assets shown are presented in accordance with generally accepted accounting principles.

Loans receivable:

Loans receivable are stated at face amount with an allowance for doubtful accounts computed as 3 percent of the balance of the loans receivable at year end.

Tax status:

The Foundation is a not-for-profit organization exempt from federal income taxes under Internal Revenue Code Section 501(c)(3).

Equipment:

Equipment is carried at cost. Depreciation is computed by the straight-line method based on the estimated useful life of the asset.

Note 2. Loans Receivable

The Foundation grants low interest loans in multiples of $500 per year for medical students. The following is a summary of the transactions affecting the loans receivable account for the years ended December 31, 1988 and 1987:

	1988		1987	
Loans receivable at January 1		$1,360,236		$1,387,698
Add loans advanced	$131,000		$154,000	
Less:				
Principal repayments	(197,391)		(181,922)	
Loans written off	(4,421)	(70,812)	(40)	(27,462)
				1,360,236
Allowance for doubtful accounts at January 1	(40,807)		(41,630)	
Current year provision for doubtful accounts	(2,297)		783	
Current year loans written off	4,421	(38,683)	40	(40,807)
		$1,250,741		$1,319,429

Note 3. Related Party Transactions

In 1987, the Missouri State Medical Association continued its financial support of the Foundation by contributing $25,000 to the Foundation. No contribution was paid during 1988.

The Foundation is also assessed by the Missouri State Medical Association an annual fee for administrative cost. For each year ended December 31, 1988 and 1987, the Foundation paid the Association $10,000 for administrative cost. The Foundation also reimburses the Missouri State Medical Association for expenses paid by the Association on behalf of the Foundation. These reimbursements for the years ended December 31, 1988 and 1987 were $2,654 and $ 2,692 for professional fees and $1,704 and $3,037 for printing and meeting expenses.

John P. Rucker
CERTIFIED PUBLIC ACCOUNTANT

To the Board of Directors of
Missouri State Medical Foundation

I have examined the financial statements of Missouri State Medical Foundation for the years ended December 31, 1988 and 1987, and have issued my report thereon dated January 20, 1989. As a part of my examination, I made a study and evaluation of the Foundation's system of internal accounting control to the extent I considered necessary to evaluate the system as required by generally accepted auditing standards. The purpose of my study and evaluation was to determine the nature, timing, and extent of the auditing procedures necessary for expressing an opinion on the Foundation's financial statements. My study and evaulation was more limited than would be necessary to express an opinion on the system of internal accounting control taken as a whole.

The management of Missouri State Medical Foundation is responsible for establishing and maintaining a system of internal accounting control. In fulfilling this responsibility, estimates and judgements by management are required to assess the expected benefits and related costs of control procedures. The objectives of a system are to provide management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of financial statements in accordance with generally accepted accounting principles.

Because of inherent limitations in any system of internal accounting control, errors or irregularities may nevertheless occur and not be detected. Also, projection of any evaluation of the system to future periods is subject to the risk that procedures may become inadequate because of changes in conditions or that the degree of compliance with the procedures may deteriorate.

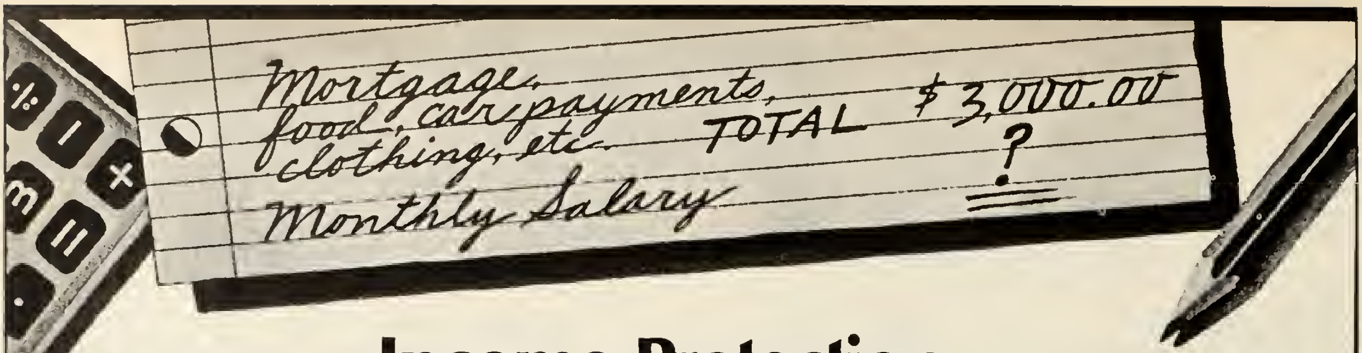
My study and evaluation made for the limited purpose described in the first paragraph would not necessarily disclose all material weaknesses in the system. Accordingly, I do not express an opinion on the Foundation's system of internal accounting control taken as a whole. However, my study and evaluation disclosed no condition that I believe to be a material weakness.

This report is intended solely for the use of management and should not be used for any other purpose.

John P. Rucker

John P. Rucker
Certified Public Accountant

January 20, 1989


Mortgage, food, car payments, clothing, etc. TOTAL $3,000.00
Monthly Salary ?

Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance programs offer you coverage and cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: James

FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ____________________

Address ____________________

City ____________ State ____________ ZIP ____________

Phone: (   ) ____________ Best time to call: ____________

Serving MSMA
Since 1943

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

MSMA
131st Annual Convention
April 13 - 16, 1989
Marriott's Pavilion Hotel, St. Louis

Preliminary Program

Scientific Program
(listed alphabetically by sponsoring specialty)

ALLERGY

Saturday, April 15

9:00-9:45 a.m.	Scientific Program "Food Intolerance" Speaker: John Anderson, M.D. University of Michigan, Detroit, sponsored by St. Louis Chapter, Dairy Association.
9:45-10:30 a.m.	Scientific Program "Future Therapies for Asthma" Speaker: Ann Pittman, M.D., Allergy and Immunology Fellow, Washington University School of Medicine, St. Louis.
10:30-11:00 a.m.	Question & Answer
11:00-11:45 a.m.	Scientific Program "Urticaria" Speaker: John Anderson, M.D.
11:45-12:00 p.m.	Question & Answer
12:00-1:30 p.m.	Lunch and Business Meeting
2:00-2:45 p.m.	Scientific Program "Endoscopic Surgery/Sinus Disease" Speaker: Stanley Thawley, M.D., Associate Professor of Otolaryngology, Washington University School of Medicine,St.Louis.
2:45-3:30 p.m.	Scientific Program "Emotional Problems in Adolescent Asthmatics" Speaker: Abby Wasserman, M.D., Research Consultant, St. Jude Children's Research Hospital, Memphis, Tenn.
3:30-4:00 p.m.	Question & Answer

Sponsored by the Missouri State Allergy Association

ANESTHESIOLOGY

Friday, April 14

6:30 p.m.	Missouri Society of Anesthesiologists Reception and Dinner

Saturday, April 15

7:30 a.m.	Missouri Society of Anesthesiologists Executive Committee Breakfast
8:00 a.m.	Missouri Society of Anesthesiologists Continental Breakfast
8:30-4:00 p.m.	ASA Key Contact Training Seminar Speaker: Michael E. Dunn, Michael E. Dunn & Associates, Inc., Washington, D.C.
12:00 noon	Missouri Society of Anesthesiologists Lunch/BusinessMeeting

Sponsored by the Missouri Society of Anesthesiologists and the Missouri Society of Otolaryngology - Head and Neck Surgery

DERMATOLOGY

Friday, April 14

1:00-2:30 p.m.	Scientific Program "Alternatives to Dermabrasion for Simple and Complicated Facial Scars and Deformities" Speaker: Nia K. Terezakis, M.D., Tulane University, School of Medicine, New Orleans, La.
2:30-2:45 p.m.	Discussion
3:00-4:00 p.m.	"Mini Case Presentations" Speaker: Vicki Gunn, M.D., Jefferson City Moderator: Joseph M. Duvall, M.D., St. Louis.

Saturday, April 15

8:25-8:30 a.m.	Welcome and Introductions Joseph M. Duvall, M.D., St. Louis.

8:30-8:55 a.m.	Scientific Program "Treatment of Cavernous Hemangiomas in Infants with High Dose Intralesional Steroids - A Form of Pulse Therapy" Speaker: Nia K. Terezakis, M.D., Tulane University School of Medicine, New Orleans, La.
8:55-9:20 a.m.	"Selected Cases of Connective Tissue Disease" Speaker: Eugene A. Bauer, M.D., Stanford University Medical Center, Stanford, Calif.
9:20-10:25 a.m.	"Dermatological Manifestations of AIDS" Speaker: Richard B. Odom, M.D., University of California Medical Center, San Francisco
10:25-10:50 a.m.	"Retinoids and the Skin" Speaker: Lynn Drake, M.D., Boston University School of Medicine, Boston, Mass.
10:50-11:15 a.m.	"Diagnosis and Treatment of Epidermolysis Bullosa" Speaker: Eugene A. Bauer, M.D., Stanford University Medical Center, Stanford, Calif.
11:15-11:30 a.m.	Discussion
1:30-2:20 p.m.	"The Federal Government and Medicine" Speaker: Lynn Drake, M.D., Boston University School of Medicine, Boston, Mass.
2:20-2:45 p.m.	"Treatment of Leg Ulcers in an Office Setting" Speaker: Nia Terezakis, M.D., Tulane University School of Medicine, New Orleans, La.
3:20-3:25 p.m.	"Mechanisms in Basement Membrane Zone Remodeling" Speaker: Eugene A. Bauer, M.D., Stanford University Medical Center, Stanford, Calif.
3:25-3:50 p.m.	"Retinoids - Compounds Important to Hair Growth" Speaker: Nia Terezakis, M.D., Tulane University School of Medicine, New Orleans, La.
3:50-4:15 p.m.	"Therapeutic Pearls" Speaker: Richard B. Odom, M.D., University of California Medical Center, San Francisco
4:15-4:30 p.m.	Discussion Moderator: Joseph M. Duvall, St. Louis

There will be a $75.00 fee for registration for these courses. Please register by March 15, 1989. For more information contact Mr. Dan Young, Executive Secretary, 8000 Crescent Drive, Clayton, MO 63105. (314) 862-3020.

Sunday, April 16

9:00-10:00 a.m.	Case Presentations St. John's Mercy Medical Center, St. Louis
10:00-11:00 a.m.	Discussion of Cases
11:00-11:30 a.m.	Annual State Dermatology Society Meeting St. John's Mercy Medical Center

Sponsored by the Missouri Dermatological Society, Inc.

EMERGENCY PHYSICIANS

Saturday, April 15

8:30-10:00 a.m.	Scientific Program "Emergency Department as a Chemical Dependency Interface with the Community" Speaker: Timothy T. Turner, D.O., FAAFP, FACM, St. Louis "New Treatments in Resuscitation" Speaker: Michael Weaver, M.D., FACEP, Kansas City
10:00 a.m.	Board Meeting

Sponsored by the Missouri Chapter, American College of Emergency Physicians

FAMILY PHYSICIANS

Friday, April 14

11:00-11:10 a.m.	Welcome and Overview Alice D. Kitchen, M.D., Assistant Professor of Psychiatry, St. Louis University School of Medicine, Member of Interfaith AIDS Task Force, St. Louis
11:10-12:00 p.m.	Scientific Program "How the Clinician Deals with AIDS Treatment" Speaker: J. William Campbell, M.D., Washington University School of Medicine, St. Louis

- Opportunistic Infection
- AIDS Related Malignancies
- Current Experimental Treatment

1:40-2:20 p.m. Scientific Program
"Pre-Post Test Counseling
Speaker: Elizabeth A. Harrison, M.D., Sacramento AIDS Foundation, Sacramento, Calif.

- Pre Test Considerations
- Early Medical Intervention
- Post Test Counseling

1:40-2:20 p.m. "HIV Neuropsychological Complications and Their Treatment"
Speaker: David Gene Ostrow, M.D., Ph.D., Director, Institute for Social Research, University of Michigan, Ann Arbor, Midwest AIDS Biobehavioral Research Center

- The Differential Diagnosis of Cognitive Impairment in Person with HIV Infection
- The Natural History of the "AIDS Dementia Complex"
- The Prospects for Therapy of ADC

2:20-3:00 p.m. "Psychosocial Aspects of the Care of AIDS Patients"
Speaker: Susan Tross, Ph.D., Memorial Sloan-Kettering Cancer Centers, Cornell University Medical College, New York

- Common Patient Responses at Various Illness Events or Stages
- Special Needs and Problems of Patients Who are Gay, IV Drug Users, Hemophiliacs, Women of Childbearing Age and Those From Minority Groups

Sponsored by the Missouri Academy of Family Physicians and the Missouri Psychiatric Association

NEUROSURGERY

Saturday, April 15
12:00 noon Luncheon and Business Meeting

Sponsored by the Missouri State Neurosurgical Society

OBSTETRICS-GYNECOLOGY

Saturday, April 15

"Endocrinology in Obstetrics and Gynecology"

8:15 a.m. Welcome
David Gearhart, M.D., Vice-Chairman, Missouri Section A.C.O.G.

8:30 a.m. Scientific Program
"Contemporary Management of Repeated Pregnancy Wastage"
Speaker: John A. Rock, M.D., Johns Hopkins Medical Institutions, Baltimore, Md.

9:05 a.m. "Infertility 1990"
Speaker: Alvin F. Goldfarb, M.D., Gynecological Endocrine Associates, Philadelphia, Pa.

9:40 a.m. "Laboratory Assays in Clinical Gynecologic Endocrinology (Your Place or Mine or Neither)"
Speaker: Larry L. Penney, M.D., University of Missouri School of Medicine,Columbia

10:35 a.m. "Contemporary Management of Endometriosis"
Speaker: John A. Rock, M.D., Baltimore, Md.

11:10 a.m. "Ovulation Induction"
Speaker: Alvin F. Goldfarb, M.D., Philadelphia, Pa.

1:30 p.m. "The Female Condom — New Contraceptive and STD Prevention"
Speaker: Mary Ann Leeper, Ph.D., Phoenix Health Care, Inc., Chicago

2:00 p.m. "Stump the Professors"
Junior Fellows
Speaker: Karen K. Driskell, M.D., Junior Fellow Representative, Truman Medical Center, Kansas City

3:00 p.m. Council Meeting

Sponsored by the Missouri Section of the American College of Obstetricians and Gynecologists

OPHTHALMOLOGY

Saturday, April 15
7:00 a.m. Missouri Ophthalmological Society, Inc. Board of Directors Breakfast and Meeting

9:00-12:00 p.m. Scientific Program
- "The Effect of Preoperative Medications and Intraoperative Fluids on Corneal Endothelium"
- "Polymegatheism of the Corneal Endothelium and its Function Related to Contact Lenses"
- "The Physiology of Intraocular Gases"
- "Fish Eyes and Corneal Edema"

Speaker: Henry F. Edelhauser, Ph.D., Medical College of Wisconsin, Milwaukee
12:00 noon Luncheon and Business Meeting
1:30 p.m. Scientific Program
Resident and Member Papers

Sponsored by the Missouri Ophthalmological Society, Inc.

OTOLARYNGOLOGY

Friday, April 14
7:00 p.m. MSO-HNS Board of Directors Meeting

Saturday, April 15
7:30 p.m. MSO-HNS Breakfast and Business Meeting

Sponsored by the Missouri Society of Otolaryngology - Head and Neck Surgery

9:00-12:00 noon Scientific Program
"ASA Key Contact Training Seminar"
Speaker: Michael E. Dunn, Michael E. Dunn & Associates, Inc., Washington, D.C.

Sponsored by the Missouri Society of Otolaryngology - Head and Neck Surgery and the Missouri Society of Anesthesiologists

PATHOLOGY

Saturday, April 15
10:00-12:00noon Scientific Program
"Evaluation of the Prolonged PTT"
Speaker: Douglas A. Triplett, M.D., Assistant Dean of Indiana University School of Medicine, Muncie
12:00 noon Luncheon and Business Meeting

Sponsored by the Missouri Society of Pathologists

PHYSICAL MEDICINE AND REHABILITATION

Saturday, April 15
9:00-10:15 a.m. Scientific Program
"Advances in the Rehabilitation of the Spinal Cord Injured Patient, Chief of Spinal Cord Programs"
Speaker: William H. Donovan, M.D., Institute for Research and Rehabilitation, Texas Medical Center, Houston

10:30-12:00noon Individual papers and presentations from residents in programs in Physical Medicine and Rehabilitation in the state of Missouri and from members of the Central Society of Rehabilitation Medicine
"Isolated Cerebral Angiitis"
Speaker: Otakar Machek, M.D., St. Louis
12:00-1:00 p.m. Luncheon and Business Meeting

Sponsored by the Central Society of Rehabilitation Medicine

PLASTIC SURGERY

Friday, April 14
"Surgery of the Breast"

2:00-3:30 p.m. Scientific Program
"Scientific and Social Aspects of Breast Implants"
Speaker: Garry S. Brody, M.D., University of Southern California, Los Angeles
"Breast Reconstruction after Mastectomy"
Speaker: Chris Paletta, M.D., St. Louis
"Treatment of the Opposite Breast in Postmastectomy Breast Reconstruction"
Speaker: William Webber, M.D., St. Louis
"Breast Surgery in Adolescence"
Speaker: Jeff Marsh, M.D., St. Louis
Moderator: Richard A. Heimburger, M.D., Columbia
6:00-7:00 p.m. Reception

Saturday, April 15
7:00 a.m. Board of Directors Breakfast Meeting

"Surgery of the Hand"

9:00-10:30 a.m. Scientific Program
"Stiff Joints of the Hand"
Speaker: Garry S. Brody, M.D., University of Southern California, Los Angeles
"External Fixation of Metacarpal/Phalangeal Fractures"
Speaker: Sameer Shehadi, M.D., St. Louis
"Immediate Reconstruction of Ring Avulsion Injuries"
Speaker: Richard A. Heimburger, M.D., Columbia
"Techniques of Thumb Reconstruction"
Speaker: Dan Bennett, M.D., Kansas City
Moderator: William B. Webber, M.D., St. Louis
11:00-12:00 p.m. Business Meeting
12:00 noon Show Me Session

Sponsored by the Missouri Association of Plastic and Reconstructive Surgery

PSYCHIATRY

Friday, April 14
11:00-11:10 a.m. Welcome and Overview
Alice D. Kitchen, M.D., Assistant Professor of Psychiatry, St. Louis University School of Medicine, Member of Interfaith AIDS Task Force, St. Louis
11:10-12:00 p.m. Scientific Program
"How the Clinician Deals with AIDS Treatment"
Speaker: J. William Campbell, M.D., Washington University School of Medicine, St. Louis
- Opportunistic Infection
- AIDS Related Malignancies
- Current Experimental Treatment

1:40-2:20 p.m. Scientific Program
"Pre-Post Test Counseling
Speaker: Elizabeth A. Harrison, M.D., Sacramento AIDS Foundation, Sacramento, Calif.
- Pre Test Considerations
- Early Medical Intervention
- Post Test Counseling

1:40-2:20 p.m. "HIV Neuropsychological Complications and Their Treatment"
Speaker: David Gene Ostrow, M.D., Ph.D., Director, Institute for Social Research, University of Michigan, Ann Arbor, Midwest AIDS Biobehavioral Research Center
- The Differential Diagnosis of Cognitive Impairment in Person with HIV Infection
- The Natural History of the "AIDS Dementia Complex"
- The Prospects for Therapy of ADC

2:20-3:00 p.m. "Psychosocial Aspects of the Care of AIDS Patients"
Speaker: Susan Tross, Ph.D., Memorial Sloan-Kettering Cancer Centers, Cornell University Medical College, New York
- Common Patient Responses at Various Illness Events or Stages
- Special Needs and Problems of Patients Who are Gay, IV Drug Users, Hemophiliacs, Women of Childbear ing Age and Those From Minority Groups

Sponsored by the Missouri Psychiatric Association and the Missouri Academy of Family Physicians

6:30-7:00 p.m. Reception
7:00-8:00 p.m. Dinner
Speaker: Jay Cutler, Special Counsel and Director of the Division of Governmental Relations, American Psychiatric Association, Washington, D.C.

Sponsored by the Missouri Psychiatric Association

RADIOLOGY

Saturday, April 15
9:00 a.m. Nominating Committee Meeting
10:00 a.m. Board of Directors Meeting
11:30 a.m. Radiation Oncology Committee
12:00 noon Board of Directors Luncheon
2:00-4:00 p.m. Scientific Program
"The Role of the American College of Radiology in Organized Medicine"
"The Board of Chancellors: The Executive Branch of the ACR"
Speaker: Ron Evens, M.D., Chancellor of ACR, Professor and Head of

Mallinckrodt Institute of Radiology, St. Louis
"The Function of the ACR Governmental Relations Department"
Speaker: Gary Price, Director of the Governmental Relations Department, The American College of Radiology, Reston, Va.
"Grass Roots Input for Good Legislation"
Speaker: Congressman Jack Buechner, Washington, D.C.
Moderator: David Witten, M.D., Columbia
4:00 p.m. Annual Meeting of the Missouri Radiological Society
5:00 p.m. Reception

Sponsored by the Missouri Radiological Society

SURGERY

Thursday, April 13
6:00 p.m. MSSS Board of Directors Cocktails and Dinner

Friday, April 14
10:30-11:00 a.m. Scientific Program
"Vascular Section"
"Retroperitoneal Approach to the Abdominal Aorta"
Speaker: Gregorio Sicard, M.D., St. Louis
11:00-11:30 a.m. "Noninvasive Diagnosis of Venous Disease: Acute & Chronic"
Speaker: Joseph J. Hurley, M.D., St. LouisUniversity

11:30-12:00noon "Fibrinolytic Therapy of Vascular Thrombotic Disease, in Particular Arterial Thrombotic Disease"
Speaker: John Corson, M.D., University of Iowa Hospitals and Clinics, Iowa City
12:00-12:30 p.m. Panel
Moderator: Edward H. Andres, M.D., St. Joseph
2:00-2;30 p.m. Scientific Program
"Special Issues Session"
"Malpractice in Missouri - How Do We Stack Up Around the Nation. Where Should We Be Heading?"
Speaker: Richard Bradley, M.D., President, MOMEDICO, St. Louis
2:30-3:00 p.m. "A Perception of Where Health Care is Heading and How We Can Influence the Changes"
Speaker: Robert Harmon M.D., Director,Missouri Department of Health, Jefferson City
3:00-4:00 p.m. General Session of the MSSS 1989 (Members only)
Moderator: Michael Bukstein, M.D., Hannibal

Saturday, April 15
8:30-9:10 a.m. Scientific Program
"Cutaneous Malignancy Session"
"Dysplastic Nevus Syndrome"
Speaker: Daniel Santa Cruz, M.D., St. Louis
9:10-9:50 a.m. "Treatment of Malignant Melanoma 1988"
Speaker: William Kraybill, M.D., St.Louis
9:50-10:30 a.m. "Management of Non-Melanotic Skin Cancers"
Speaker: Charles L. Puckett, M.D., Columbia
10:30-11:00 a.m. Panel
Moderator: David Clark, M.D.

Sponsored by the Missouri State Surgical Society

THORACIC

Friday, April 14
11:00-12:30 p.m. Annual Charles A. Brasher, M.D., Medical Lectureship
"Tuberculosis - Toward Elimination"
Speaker: William C. Banton, II, M.D., M.P.H., St. Louis
Moderator: Robert M. Bruce, M.D., St. Louis

Sponsored by the Missouri Thoracic Society and the American Lung Associations of Eastern and Western Missouri

UROLOGY

Saturday, April 15
1:00-2:30 p.m. Scientific Program
"Newer Modalities in The Diagnosis, Staging, Evaluation and Followup of Patients with Prostate Cancer"
Speaker: Raul O. Parra, M.D., St. Louis University
"The Sexual and Urinary Rehabilitation of the Prostatic Cancer Patient

Speaker: John G. Gregory, M.D., St. Louis University School of Medicine, St. Louis
"Contemporary Treatment Options for Metastatic Prostate Carcinoma"
Speaker: Micheal Chehval, M.D., St. Louis University School of Medicine and St. John's Mercy Medical Center, St. Louis
"Current Treatment Strategies for Organ Confined and Locally Advanced Prostate Cancer"
Speaker: David Barrett, M.D., Mayo Clinic, Rochester, Minn.
Moderator: Raul O. Parra, M.D., St. Louis

Sponsored by the Missouri Urological Society and the American Cancer Society, Missouri Division, Inc.

Affiliated Annual Program Events

CANCER

Saturday, April 15

1:00-2:30 p.m. Scientific Program
"Newer Modalities in The Diagnosis, Staging, Evaluation and Followup of Patients with Prostate Cancer"
Speaker: Raul O. Parra, M.D., St. Louis University
"The Sexual and Urinary Rehabilitation of the Prostatic Cancer Patient
Speaker: John G. Gregory, M.D., St. Louis University School of Medicine, St. Louis
"Contemporary Treatment Options for Metastatic Prostate Carcinoma"
Speaker: Micheal Chehval, M.D., St. Louis University School of Medicine and St. John's Mercy Medical Center, St. Louis
"Current Treatment Strategies for Organ Confined and Locally Advanced Prostate Cancer"
Speaker: David Barrett, M.D., Mayo Clinic, Rochester, Minn.
Moderator: Raul O. Parra, M.D., St. Louis

Sponsored by the American Cancer Society, Missouri Division, Inc. and the Missouri Urological Society

WOMEN PHYSICIANS

Saturday, April 15

12:00 noon AMWA Luncheon

Sponsored by the American Medical Women's Association

MISSOURI PHYSICIANS' HEALTH COMMITTEE PROGRAM

Friday, April 14

1:00-4:00 p.m. Intervenor Training Seminar

Sponsored by the MSMA Missouri Physicians Health Committee

YOUNG PHYSICIANS COMMITTEE

Saturday, April 15

10:30-12:00noon Young Physicians Committee meeting

Sponsored by the MSMA Young Physicians Committee

Special Events

Thursday, April 14

6:00 p.m. MSMA Auxiliary Fundraiser for Missouri State Medical Foundation and the AMA-ERF

Friday, April 15

9:00 a.m. General Session
Guest Speaker: Richard L. Reece, M.D., Minneapolis, Minn., editor, publisher and consultant on managed health care

Saturday, April 16

7:15 a.m. MSMA Auxiliary Public Affairs Breakfast
Guest Speaker: Congressman Jack Buechner, Missouri Second District
9:30 a.m. Discuss the Issues With Your AMA Delegates
6:00 p.m. Presidential Inauguration
7:00 p.m. MSMA Reception

Annual Meetings & Events

Thursday, April 14

12:00 noon	Metropolitan Medical Society of Greater Kansas City Luncheon
12:00 noon	St. Louis Metropolitan Medical SocietyLuncheon

Friday, April 15

7:00 a.m.	MSMA Councilor District Breakfasts Districts 1, 2, 4, 5, 6, 8, 9, 10
8:30 a.m.	Missouri University Board of Governors Breakfast and Meeting
11:30-2:30 p.m.	MISSOURI MEDICINE Editorial Board & Publications Committee Meeting and Luncheon
12:00 noon	Metropolitan Medical Society of Greater Kansas City Luncheon
12:30 p.m.	Student Delegates Luncheon
12:30 p.m.	Missouri University Medical Alumni Luncheon
2:00 p.m.	St. Louis Metropolitan Medical Society Caucus
2:30-4:00 p.m.	Missouri State Medical Foundation Annual Meeting
6:00-7:30 p.m.	Missouri University Medical Alumni Reception
6:00-7:30 p.m.	St. Louis University Medical Alumni Reception
6:00-7:30 p.m.	Washington University Medical Alumni Reception

Saturday, April 15

1:30 p.m.	Missouri Medical Political Action Committee Meeting

House of Delegates

Thursday, April 13

10:00 a.m.	Opening Session *Presiding, Arlen D. Winsky, M.D., Springfield, Speaker* Reports of Officers Reports of Committees and Commissions President's Message
1:30 p.m.	Reference Committee Meetings

Friday, April 14

4:00 p.m.	Second Session Report of the Nominating Committee Reports of Reference Committees Report of the Council

Sunday, April 16

7:30 a.m.	Final Session, Breakfast Meeting Election of Officers Report of Election of Councilors Reports of Reference Committees Installation of Officers Appointment of Committee & Commission Members

Registration of Delegates opens at 8:00 a.m. in the Main Lobby on Thursday, Friday, and Saturday.

Autologous Blood Transfusion

Anne T. Thomas, M.D. and Michael C. Perry, M.D., FACP

Columbia, Missouri

Autologous blood transfusion is emerging as a popular option in patients undergoing elective procedures. Predeposit and perioperative autotransfusion, the two major types of autologous transfusion, can be performed safely in a wide variety of conditions and in patients of all ages. We discuss the risks and benefits and outline the minimal requirements of donor-patients. Autologous blood transfusion is a safe and effective method of providing blood products. It is the safest transfusion practice.

Autologous transfusion, defined as "return to a donor of blood or a blood component taken or collected from that individuals,"[1] can now be considered more often for patients undergoing elective surgical procedures. Past risks of transfusion such as hepatitis B and syphilis, and current potential complications such as non-A, non-B hepatitis and acquired immunodeficiency syndrome (AIDS) also illustrate that today's blood transfusion may produce tomorrow's scourge. As physicians we are obligated to provide our patients with the best and safest medical care possible.

Types of autologous transfusion

Two broad categories of autologous transfusion exist: predeposit and perioperative autotransfusion. Predeposit includes the long-term frozen storage of blood for patient with rare blood groups or short-term refrigerated storage prior to an elective procedure. Perioperative autotransfusion can be further subdivided into hemodilution, intraoperative, or postoperative blood salvage.

Hemodilution is the collection of blood just prior to surgery, with volume replacement by crystalloid or colloid, and subsequent reinfusion of the blood after major bleeding has been controlled.[2] This has been used with cardiac and vascular operations, and spinal and total hip procedures. Hemodilution may decrease the viscosity of the blood for better microcirculation.[3]

Blood salvage is intraoperative collection of blood from uncontaminated wounds or body cavities. The blood is collected, filtered, and reinfused as whole blood, or processed and reinfused as washed red blood cells.[4] This has been successfully employed in operations for ruptured tubal pregnancies,[5] cardiac and orthopedic surgery, vascular procedures,[6] trauma, and even liver transplantation.[7] Contraindications for this procedure include fecal or bacterial contamination of the blood or contamination with malignant cells. With massive transfusion, thrombocytopenia and coagulopathies may occur. One advantage of immediate reinfusion of autologous blood is that the autologous blood's concentration of 2,3 diphosphoglycerate is higher than that in stored, banked blood.[3]

Table 1

Donor/Patient Benefits of Autologous Transfusion

1. No transmission of infectious diseases e.g. syphilis, HIV, cytomegalovirus.
2. No alloimmunization of erythrocyte, leukocyte, platelet or protein antigens.
3. No risk of transfusion reactions due to alloimmunization.
4. No graft versus host reactions.
5. Increased hematopoiesis at time of surgery.
6. Cost reduction if pretransfusion testing curtailed.
7. Decreased demand from homologous pool.
8. Preservation of labile coagulation factors with immediate reinfusion.

Postoperative autotransfusion involves the salvage of blood via mediastinal or pleural drainage tubes from cardiac or traumatic hemothorax wounds. This blood is processed prior to reinfusion, and has been found to be most helpful in the management of postoperative bleeding, when multiple units are required to maintain an adequate hematocrit.[8]

Benefits of autologous transfusion

Transmission of infectious disease such as hepatitis, syphilis, AIDS and cytomegalovirus infection is eliminated when autologous transfusion is used. Alloimmunization to erythrocyte, leukocyte, platelet, or protein antigens is likewise eliminated. There is no risk of hemolytic, febrile, or allergic reactions due to alloimmunization, and graft versus host reactions are not a cause for concern. Repeated preoperative phlebotomy can also stimulate hematopoiesis by the time of surgery. Overall, costs may be reduced by eliminating the need for pretransfusion testing.[9] Other advantages include reduction of the quantity of homologous blood given during a particular procedure,[10] and preservation of labile coagulation factors. Individuals whose religious beliefs prevent them from accepting banked blood may accept bypass circulation procedures using a closed loop system. Others may still accept an autologous transfusion of blood that has been physically separated from their bodies.

Table 2

Blood Center Benefits from Autologous Transfusion

1. Available blood for hard-to-crossmatch patients.
2. Potential increase in homologous supply.
3. Frequent reduction in transfusion levels.
4. Available blood in remote areas.
5. Potential increase in homologous donor base.

Table 1 summarizes the patient benefits, and Table 2 lists benefits for the blood center and transfusion service. One significant benefit is the ready availability of blood for patients for whom compatible blood is normally not easily available. Also, if autologous units are not used, they may be provided to the transfusion service if the patient's physician releases the products for general use, increasing the supply of homologous blood. There is often a reduction in overall transfusion levels for patients involved. In remote areas, autologous transfusion provides blood for surgical procedures when supplies are unpredictable. There also tends to be an increase in the donor pool and the community blood supply because autologous donors often become homologous volunteer donors.[9]

Indications for autologous transfusion

Certain patients are better suited to autologous transfusion, as indicated in Table 3. These include people with rare blood types or a history of severe transfusion reactions and some Jehovah's Witnesses, who accept certain types of autologous transfusion. Other indications are intraoperative salvage of blood from a massive hemorrhage into a clean wound[9] and improving selected surgical procedures by hemodilution, which reduces whole blood viscosity, improves capillary perfusion, and reduces the chance of thrombosis.[11] Autologous transfusion may be useful in remote areas where blood supplies are difficult to maintain.

Table 3

Indications for Autologous Transfusion

1. Rare blood types, e.g. Rh_{Null}
2. Prior history of severe transfusion reactions
3. Prevention of alloimmunization.
4. Patient with known alloantibodies.
5. Acceptance by some Jehovah's Witnesses.
6. Intraoperative salvage in a clean wound.
7. Improved surgical risk with hemodilution.
8. Remote locations where blood supply unpredictable.

Table 4

Potential Problems with Autologous Transfusion

1. Anemia and hypovolemia.
2. Economic loss for donation time.
3. Clerical errors in labeling and storage.
4. Increased costs with paperwork, unexpected donor reactions, and professional time.
5. Units lost with delays, cancellations, thawing and deglycerolization.
6. Intraoperative hypoxemia with hemodilution.
7. Consumption of coagulation factors and platelets with intraoperative salvage.
8. Sepsis/metastasis from contaminated wounds.

Potential problems associated with autologous transfusion

In patients who are eligible for predeposit donation and storage, anemia and hypovolemia may result if the American Association of Blood Banks phlebotomy guidelines are not followed. The patient also may need to sacrifice working time to arrange donations. Clerical errors in recipient identification, labeling, and storage are possible and still represent the most common cause of transfusion reactions. There are costs associated with paperwork, donor reactions (should they occur), and increased professional time. Units of blood products may be lost through delay or cancellation of surgery or during thawing or deglycerolization[9] of frozen red cells.

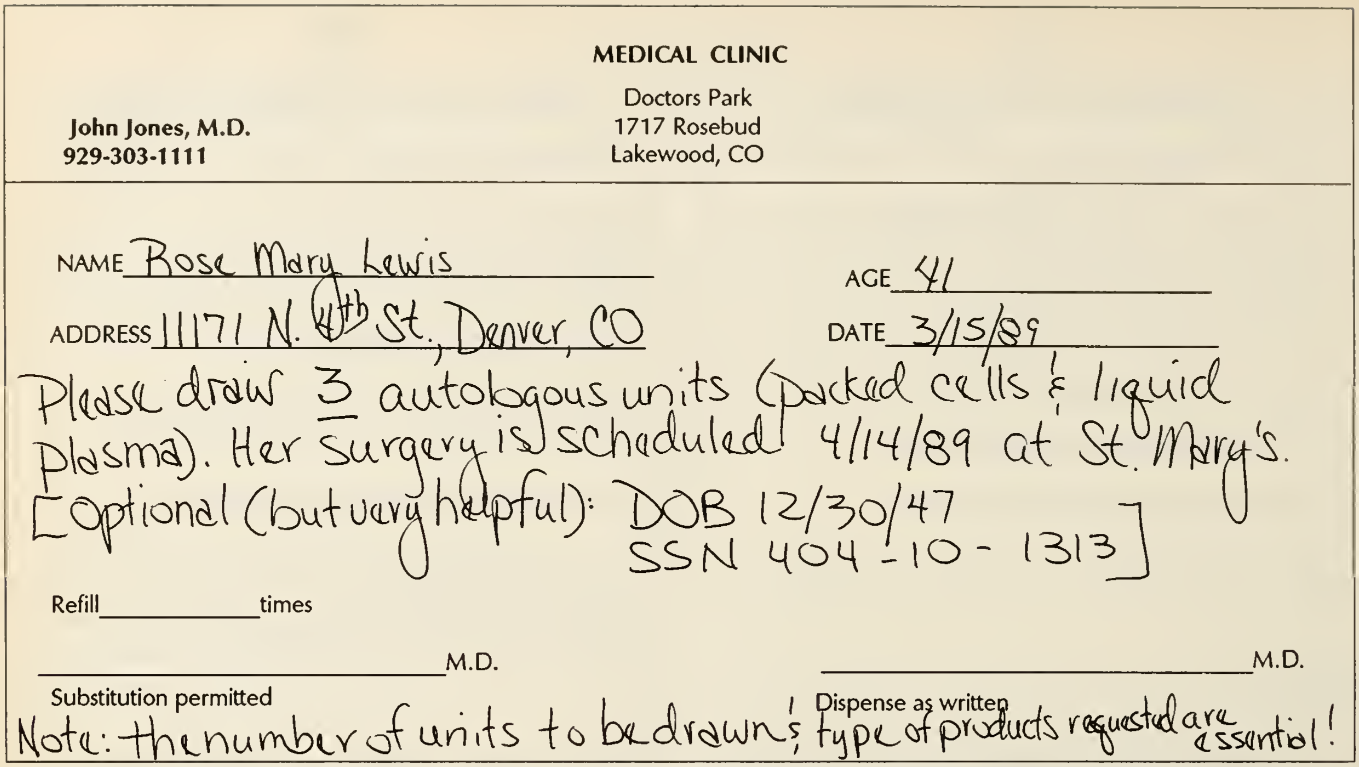
In patients undergoing hemodilution with short-term storage, intraoperative hypoxemia is a risk. Incorrect processing or storage may damage the blood. Intraoperative blood salvage may be complicated by consumption of coagulation factors and platelets. If wounds are unknowingly contaminated, the possibility of sepsis exists. Should tumor cells contaminate the collected blood, there is the possibility (largely theoretical), of cancer dissemination.[9] Malignant cells have been found in filtered blood collected intraoperatively.[12]

Arranging autologous transfusion

The criteria for autologous donors differ from those for homologous donors. Each patient must be cleared by his personal physician and must meet additional requirements. Patients with severe heart disease, elderly and pediatric patients, and pregnant women have been shown to tolerate donation quite well.[13] There are no age limitations; even infants have received autologous transfusions. However, local transfusion services may have age restrictions. There is no minimum weight to be met, either. For patients under the homologous donation weight limit of 110 pounds, adjustments are made so that no more than 12% of the blood volume, or 450 ± 45 ml, whichever is less, is drawn. Formulas to calculate acceptable limits with respect to weight are available. Pregnancy is not an absolute contraindication[14] and blood for an anticipated cesarean section is most safely collected during the second trimester.[13]

Donors' hemoglobin concentrations must be 11 gm/dL or greater or a hematocrit of 34 percent or greater.[15] A period of approximately 72 hours is required for synthesis and mobilization of protein and return of plasma volume to normal after a donation.[16] Therefore, donations must be at least 72 hours apart, and the final donation should be 72 hours or more before surgery.

Depleted iron stores are a concern with frequent donations.[17] Iron supplementation consisting of ferrous sulfate (non-enteric coated) 325 mg by mouth up to thrice daily, beginning one week *prior* to the first donation and continuing several months after the procedure, is strongly recommended. The hemoglobin will fall approximately 1 gm/dL for each unit drawn initially, then will stabilize, and perhaps even begin to normalize as the marrow increases production. A healthy marrow with adequate iron replacement can increase its normal production level five to six times with stimulation by phlebotomy.[9]



MEDICAL CLINIC

Doctors Park
1717 Rosebud
Lakewood, CO

John Jones, M.D.
929-303-1111

NAME Rose Mary Lewis
AGE 41
ADDRESS 11171 N. 4th St., Denver, CO
DATE 3/15/89

Please draw 3 autologous units (packed cells & liquid plasma). Her surgery is scheduled 4/14/89 at St. Mary's. [Optional (but very helpful): DOB 12/30/47 SSN 404-10-1313]

Refill ____________ times

______________________ M.D.
Substitution permitted

______________________ M.D.
Dispense as written

Note: the number of units to be drawn & type of products requested are essential!

Fig 1. Sample prescription for ordering autologous blood from the American Red Cross Blood Center in Columbia, MO.

If the patient meets the criteria above and agrees to participate, he must give informed consent at the blood center. This form may include a clause to release the cells into the homologous pool if the patient meets appropriate donor criteria and the products are not required. Some blood centers, however, do not permit this. In mid-Missouri, only a prescription is required[18], listing the patient's name, address, and the number and type (packed red blood cells, fresh frozen plasma, etc.) of units to be drawn. The date, location, and type of procedure are also included (Fig 1). The patient contacts the blood donation center, presents the prescription and arranges times for donation. Other blood banks have a preprinted form that can be obtained from the respective blood center for the physician to complete.[19] A call by the patient's physician to the local transfusion service will clarify instructions for the patient to donate in that area. If not already done by the personal physician, the blood bank director may give the patient a prescription for supplemental iron.

Previously frozen, then thawed stored red cells are suitable for transfusion up to 42 days after donation. This time period can accommodate the transfusion needs of most elective surgery.

Utilization of autologous transfusion

Toy, et al[10] reported the experience of 18 hospitals' autologous transfusion practices. Of the 4,996 patients who underwent elective surgery, 1,287 (26%) had cross-matched blood ordered. Five hundred ninety (46%) were deemed eligible for predeposit, but only 32 (5%) actually did so. Of the 199 patients who did not predeposit, but received blood, 68% by their estimation, could have avoided homologous blood. The possible reasons that predeposited autologous blood was not used included the added inconvenience of predonation to all parties involved: surgery would have to be scheduled around it, the patient would be required to travel, and would have to tolerate the donation.

Conclusion

Despite rigorous screening of *homologous* blood donors and the units collected, complications can, and do, arise. This is most obvious in patients who acquired AIDS through blood products prior to the recognization of HIV as a contaminant, and subsequent screening. A recent report by the Center for Disease Control of patients acquiring human immunodeficiency virus (HIV) infection and AIDS from sero-negative blood donated by newly infected donors further emphasizes that the current antibody-dependent tests are not 100% sensitive. The authors describe a "remote but real risk of HIV infection" that may be passed on to patients receiving blood products.[20]

Autologous blood transfusion has been endorsed by the Committee on Hospital Transfusion Practice of the American Association of Blood Banks as well as the Council on Scientific Affairs of the American Medical Association.[3] In patients who meet the criteria, this option should be considered the safest transfusion practice.

References

1. Kuban DJ: Autologous tranfusion: a historical review in American Association of Blood Banks, in *Autologous Transfusion*, Washington DC, American Association of Blood Banks, 1976.

2. Lowenstein E, Hallowell P: Hemodilution and fresh autologous blood tranfusion in open heart surgery, in *Autologous Transfusion*, Washington DC, American Association of Blood Banks, 1976.

3. AMA Council on Scientific Affairs: Autologous blood transfusion. *JAMA* 1986; 256:2378.

4. Gilcher RO: Autologous transfusion blood salvage, in *Autologous Transfusion*, Washington DC, American Association of Blood Banks, 1976.

5. Merrill BS, Mitts DL, Rogers W, et al: Autotransfusion: Intraoperative use in ruptured ectopic pregnancy. *J Reprod Med* 1980; 24: 14.

6. Young JN, Ecker RR, Moretti RL, et al: Autologous blood retrieval in thoracic, cardiovascular, and orthopedic surgery. *Am J Surg* 1982; 144: 48.

7. Dzik WH, Jenkins R: Use of intraoperative blood salvage during orthotopic liver transplantation. *Arch Surg* 1985; 120: 946.

8. Hauer JM, Thurer RC: Controversies in auto-transfusion. *Vox Sang* 1984; 46:8.

9. American Association of Blood Banks: The technical manual of the American Association of Blood Banks, ed 9. Arlington, Va, American Association of Blood Banks, 1985, p 360.

10. Toy PTCY, et al: Predeposited autologous blood for elective surgery. *N Engl J Med* 1987; 316: 517.

11. Kay LA: The need for autologous blood transfusion. *Br Med J* 1987; 294: 137.

12. Yaw PB, Sentany M, Link WJ, Wahle WM, Glover JL: Tumor cells carried through autotransfusion. *JAMA* 1975; 231: 490.

13. Mann M, Sacks HJ, Goldfinger D: Safety of autologous blood donation prior to elective surgery for a variety of potentially "high risk" patients. *Transfusion* 1983; 23: 229.

14. Milles G, Browne WH, Barrick RG: Autologous transfusion for elective cesarean section. *Am J Obst & Gynec* 1969; 103:1166.

15. Holland PV, Schmidt PJ (eds): *Standards for Blood Banks and Transfusion Services.* ed 12. Arlington Va, American Association of Blood Banks, 1987.

16. Adamson J. Hillman R: Blood volume and plasma protein replacement following acute blood loss in normal man. *JAMA* 1968; 205:609.

17. Finch CA, Cook JD, Labbe RF, et al: Effects of blood donation on iron stores as evaluated by serum ferritin. *Blood* 1977; 50:441.

18. Personal communication, American Red Cross Blood Center, Columbia, Mo,, January 1988.

19. Personal communication, American Red Cross Blood Center, Springfield, Mo., and Community Blood Center, Kansas City, Mo, January 1988.

20. Ward JW, Holmberg SO, Allen JR, et al: Transmission of human immunodeficiency virus (HIV) by blood transfusions screened as negative for HIV antibody. *N Engl J Med* 1988;318:473.

The Authors

ANN T. THOMAS, M.D.
MICHAEL C. PERRY, M.D.

Dr. Thomas is currently serving a fellowship in hematology at Vanderbilt University in Nashville, Tenn. She completed her residency in internal medicine at the University of Missouri-Columbia Hospital and Clinics where Dr. Perry is professor and chairman of the Department of Medicine.

Reprints

Michael C. Perry, M.D., FACP
MA406 Medical Sciences Building
One Hospital Drive
Columbia, Missouri 65212

Splenosis Masquerading as Small Bowel Neoplasm

Michael Metzler, M.D., James Long, M.D., and Alfred Llorens, M.D.
Columbia, Missouri

Incidental discovery of a mass during laparoscopic surgery resulted in exploratory laparotomy for a young woman. The mass' uncharacteristic appearance belied its true identity as displaced splenic tissue. The authors suggest ways to identify splenosis without resorting to further surgery.

We recently saw a young woman with an unexpected lesion that appeared to be a neoplasm on her terminal ileum. The lesion was noted during laparoscopic tubal ligation. She had a history of splenectomy for trauma during childhood. Although splenosis was considered preoperatively, the tissue in question did not exhibit the characteristic red-purple coloring of splenic tissue. Laparotomy was undertaken for diagnosis. An alternative method of definitive diagnosis is suggested.

Case Report

A 28-year-old Caucasian woman was found to have a 2 x 2 cm bosselated mass on her ileum during a laparoscopic tubal ligation. The liver was visualized and appeared to be normal, as did the remainder of the visualized abdominal organs. A video record of the laparoscopy was made. General surgical consultation was later obtained for a presumed small bowel tumor. A detailed review of systems revealed no gastrointestinal complaints except for occasional constipation. There was no history of flushing, bronchospasm or palpitations suggestive of carcinoid syndrome. The patient's weight had been stable, and she believed herself to be in good general health with the exception of essential hypertension, which was managed with a beta-blocker and diuretics.

The patient had been involved in a motor vehicle accident 25 years previously, in which she suffered a blunt abdominal injury necessitating splenectomy. She had been evaluated for muscle aches in the past and been found to have a positive Sjogren's syndrome antibody, but did not have clinical correlation with the syndrome.

Physical examination was unremarkable except for a well-healed upper midline abdominal incision. Chest roentgenogram, electrocardiogram, SMAC and heme profile were within normal limits. Platelet count was elevated at 448,000. No abnormal red cell morphology was noted on blood smear; no Howell-Jolly bodies

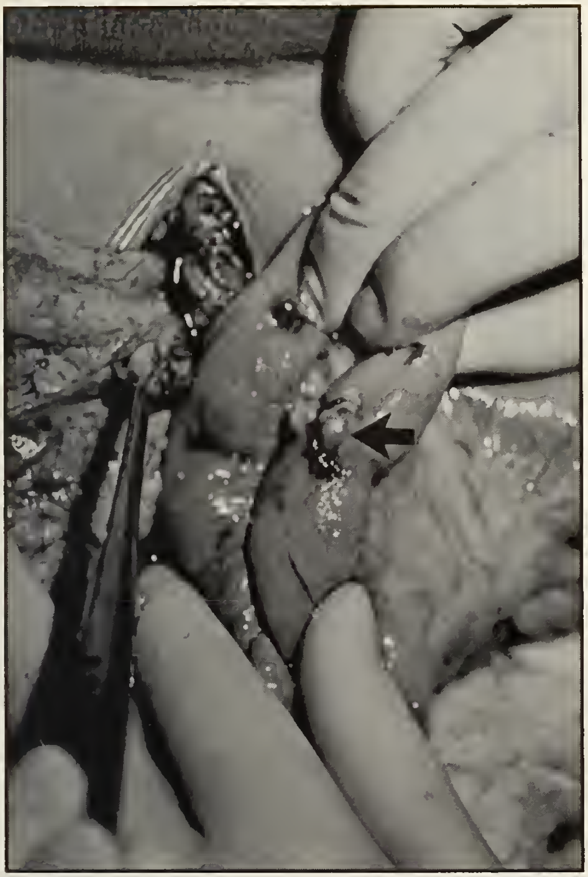


Fig 1. Operative photograph showing splenosis in omentum (forceps) and site of biopsy of splenosis at terminal ileum (arrow).

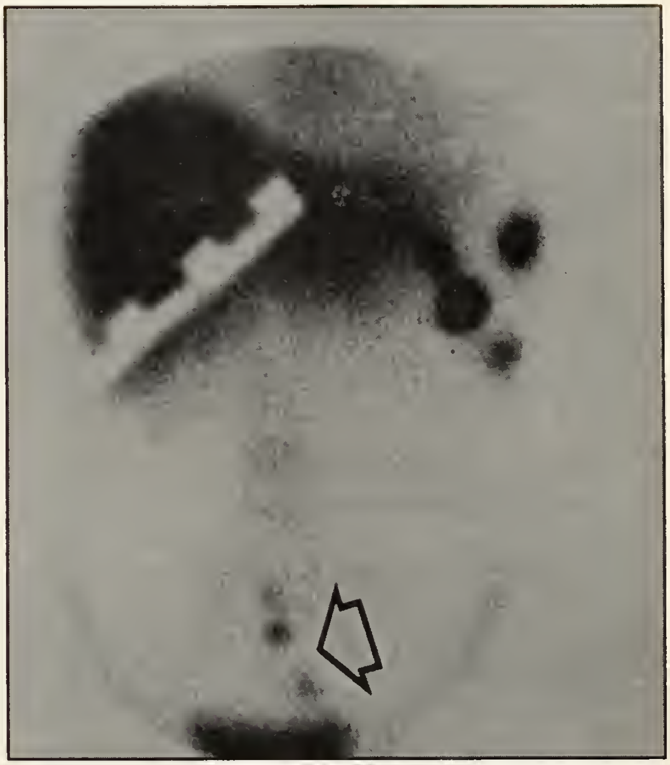


Fig 2. Technetium-99 heat-damaged autologous red cell scan of patient; anterior/posterior view. Three faint areas of isotope uptake in the pelvis (arrow) represent the splenosis noted on laparoscopy and later biopsied. The areas of uptake in the left upper quadrant show accessory spleens and other areas of splenosis. Radionuclide imaging of the liver and bladder is also seen; a lead marker (white) indicates the right costal margin.

(nuclear remnants) or Heinz bodies (denatured hemoglobin) were present.

Three weeks after her laparoscopy, the patient underwent exploratory laparotomy. In addition to two accessory spleens and splenosis found near the tail of the pancreas, several areas of splenosis were found near the terminal ileum, accounting for the mass seen during laparoscopy. The ileal implants were partially covered by omental adhesions, obscuring the characteristic deep red coloring of splenic tissue. Biopsy of the tissue in the ileal area confirmed splenosis (Fig 1). No resection of this tissue was performed, as ileum would also have been removed in an otherwise asymptomatic patient. The patient was discharged home on the fifth hospital day and has done well over the last 10 months. A Tc99 heat-damaged red cell scan was performed one month postoperatively to see whether the previously identified splenic tissue could be satisfactorily imaged (Fig 2).

Discussion

Fewer than 200 cases of splenosis following trauma have been reported [1]; we suspect this number reflects under-reporting. Noninvasive imaging techniques using intravenous radiolabeled substances that are taken up by splenic tissue have identified splenic implants. Derin et al used isotope-tagged heat-damaged autologous red cells to scan asymptomatic patients months to years after splenectomy for either trauma or hematologic disorders. Fifty-seven percent of the patients who underwent splenectomy for trauma had evidence of splenosis; none of the patients with spleens removed for hematologic reasons had positive scans. They concluded that trauma is a key factor in the development of splenosis.[2] Nuclear scanning techniques have also identified intra-thoracic splenosis following diaphragmatic rupture.[3,4]

This patient underwent exploratory laparotomy after the diagnosis of splenosis had been discounted due to the non-characteristic appearance of the implants at laparoscopy. At laparotomy, it was found that omental adhesions and fibrous tissue were mixed with the splenic tissue, resulting in the abnormal coloring. If the tissue in question could have been identified with certainty as splenosis, the operation could have been avoided. The following procedure is suggested to identify splenosis in future cases noted at laparoscopy:

(1) Tissue suspected to be splenosis during laparoscopy should have a radiopaque metallic clip placed near the tissue.
(2) Tc99-labeled heat-damaged autologous red cell scan should be done later to identify functional splenic tissue.
(3) Portable abdominal x-ray films taken the same time and in the same position as the radionuclide scan would allow specific location of the metallic clips in relation to the tissue taking up the radionuclide.

The above scheme is suggested in preference to direct biopsy because splenic tissue is quite vascular and adequate hemostasis may not be possible with laparoscopic technique. In addition, if the suspect tissue is malignant, laparoscopic biopsy may seed tumor and preclude an otherwise curative resection.

References

1. Sheldon GF, Croom RD, Meyer AA: The Spleen, in Sabiston D (ed): *Textbook of Surgery*, ed 13, Philadelphia, WB Saunders, 1986, p 1210.

2. Derin H, Yetkin E, Ozkilic H, et al: Detection of splenosis by radionuclide scanning. *Br J Radiol* 1987; 60 (717): 873-875.

3. Schiff RG, Leonidas J, Shende A, et al: The non-invasive diagnosis of intrathoracic splenosis using technetium-99 heat-damaged red blood cells. *Clin Nucl Med* 1987; 12 (10) 785-787.

4. Yousem SA: Thoracic splenosis. *Ann Thorac Surg* 1987; 44 (4): 411-412.

The Authors

MICHAEL METZLER, M.D.
JAMES LONG, M.D.
ALFRED LLORENS, M.D.

The authors are from the University of Missouri, Columbia. Dr. Metzler is associate professor of surgery. Dr. Long is chief resident, department of surgery. Dr. Llorens is professor of obstetrics & gynecology.

Reprints

Michael Metzler, M.D.
Associate Professor of Surgery
University of Missouri-Columbia
Columbia, MO 65212

Vaginal Hysterectomy Combined with Liposuction

S. Robert Kovac, M.D.
St. Louis, Missouri

Liposuction of the body has been safely combined with vaginal hysterectomy under certain guidelines. Morbidity and length of hospital stay were compared in 50 patients in whom vaginal hysterectomy was the sole procedure performed, with 50 patients in whom vaginal hysterectomy was combined with liposuction at the patient's request. These patients were enrolled in an experimental protocol to evaluate the safety of combining these two procedures. A statistical analysis showed no significant differences in the two groups, indicating that liposuction can be safely combined with uncomplicated vaginal hysterectomy.

Women in increasing numbers are seeking the advice and counsel of gynecologists in their search for a better self-image. With the widespread publicity surrounding liposuction in recent years, women who are scheduled for hysterectomies frequently ask about the possibility of having liposuction performed during the same operation.

Although combining lipectomy with pelvic surgery has a long history, [1,2] most gynecologists feel ill-prepared to deal with the unprecedented number of patients requesting cosmetic procedures. As with any combined procedure, concern is expressed regarding the consequences:[3,4] increased morbidity, prolonged surgical time, and extended hospital stay. Because increased morbidity has been reported when abdominal gynecologic procedures and abdominoplasty are performed at the same time[3], it seemed appropriate to question whether similar morbidity would occur if vaginal hysterectomy and liposuction were combined. It is well documented that these two procedures, performed separately, have less morbidity and mortality than abdominal hysterectomy and abdominoplasty employed independently.[5-9]

This study was designed to determine the outcomes of patient morbidity and length of stay in a group of vaginal hysterectomy patients when liposuction is performed at the patient's request.

Materials and Methods

One hundred private patients who had vaginal hysterectomies at St. John's Mercy Medical Center, St. Louis, Mo., from August, 1985, to August, 1988, were included in this prospective study. They were assigned to one of two groups. Group I included 50 patients who had vaginal hysterectomy followed by liposuction of the

Table 1
Patient Characteristics and Preoperative Diagnosis

Characteristics	Group i N=50 (mean ± SD)	Group II N=50 (mean ± SD)
Age (year	42.2; 7.2	41.0; 7.3
Weight (kg)	64.2; 8.0	68.0; 14.1
Parity	2.5; 1.2	2.1; 0.7
Uterine Weight (gm)	132.5; 47.0	122.0; 42.0

Preoperative Diagnosis	Group I	Group II
Leiomyoma/Adenomyosis	35	32
Prolapse	18	22
Dysfunctional Uterine Bleeding	8	5
Cervical Intraepithelial Neoplasia	4	3

Table2
Study Outcome

	Group I N=50 (mean ± SD)	Group II N=50 (mean ± SD)
Surgical Time (minutes)	79.0; 22.0	35.0; 12.0
Hemoglobin Drop (gm/dl)	2.0; 1.3	1.4; 0.8
Hematocrit Drop (%)	6.2; 2.6	4.7; 2.5
Length of Stay	3.5; 0.8	3.3; 0.6
Transfusion	2	0
Febrile Morbidity	4	8
Fat Removed (mL)	1045	----

abdomen, buttocks, and thighs. Group II included 50 patients who underwent vaginal hysterectomy as the sole procedure.

The patients were assigned to one of the two groups in the following manner: Group I was made up of 50 patients who requested liposuction simultaneously with their vaginal hysterectomy and who were determined to be good candidates for liposuction. Although fifty-six patients requested liposuction with vaginal hysterectomy during the period of this study, six were considered unsuitable candidates for liposuction. These patients were excluded from the entire study. Following the completion of each vaginal hysterectomy and liposuction procedure, the next patient undergoing a vaginal hysterectomy who would have qualified as a good candidate for liposuction, but did not request the procedure, was included in Group II (Control Group). All the vaginal hysterectomies and liposuction procedures were performed by the same surgeons.

The following criteria were employed to determine whether a patient was or was not a good candidate for liposuction:

1. Presence of localized areas of excessive fat, not generalized obesity.
2. Good skin elasticity.
3. Free of complicating medical conditions.
4. Motivated to diet and exercise.

In addition to the vaginal hysterectomy and liposuction procedure, five patients in Group I had one or both ovaries removed, and eight patients had vaginal repair of the bladder floor. Epidural anesthesia was used in five patients in Group I and four patients in Group II. A general anesthetic was administered to all other patients.

All patients received prophylactic antibiotics (cefoxitin, 2 g intravenously on call to the operating room). Patients in both groups were instructed to take 325 mg ferrous sulfate daily for two weeks prior to surgery.

Before written consent was obtained from patients in Group I, they were informed of the potential risks of liposuction, specifically the risk of bleeding disorders and the possible need for blood replacement. They were informed that vaginal hysterectomy would be performed first and that if any complications were encountered during the initial procedure, liposuction would not be carried out. Also, they were told that if the blood loss during the gynecologic portion of the surgery exceeded 300 mL, liposuction would not be carried out.

The amount of fat to be removed was determined preoperatively. It was decided that the maximum amount to be removed was between 1750 and 2000 mL, in keeping with the safe limits not requiring transfusion reported in the literature[10]. The following end-points were selected for comparison between the two groups: Intraoperative blood loss, changes in coagulation factors, length of the surgery, febrile morbidity, blood replacement, and length of hospital stay. In Group I patients, the amount of fat and fluid removed was also noted. Uterine weight was recorded as a measure of the similarity between the two groups of patients.

Intraoperative blood loss was determined by the difference in hemoglobin/hematocrit levels preoperatively and the morning after surgery. Coagulation profiles were evaluated preoperatively and at 6 and 24 hours after surgery. Febrile morbidity was defined as a temperature greater than or equal to 38.3°C 24 hours after surgery. The length of stay was defined as the number of days until discharge, including the day of surgery and excluding the morning of discharge.

Analysis of variance was performed by the Mann-Whitney test.

Results

Vaginal hysterectomy was completed in all patients. It was not necessary to cancel the liposuction procedure in any of the Group I patients because of excessive blood loss during the vaginal hysterectomy.

Liposuction, under the protocol established preoperatively, was performed in 48 of the 50 Group I patients. The other two patients requested more extensive liposuction. They had 2200 and 3200 mL of fat removed, respectively, and both required blood transfusions. However, these two patients are included in the evaluation of the results.

Potentially confounding variables of age, weight, and parity were not significantly different between the two groups of patients, as shown in Table 1. The size of the uterus and the preoperative indications for hysterectomy were also similar between the two groups.

There was no deviation from normal values in coagulation studies obtained preoperatively and at 6 and 24 hours postoperatively. Platelet count remained about 200/cu mm, fibrinogen levels about 250 mg/dL, fibrin degradation products were less than 10 mg/mL, prothrombin times remained between 11.1 - 13.5 sec., and partial thromboplastin time was between 21 - 31 sec. for all patients.

Independent variables are outlined in Table 2. The surgical time and the hemoglobin/hematocrit drop were significantly larger in the group of patients having hysterectomy and liposuction than in those patients having hysterectomy alone. However, the difference had no effect on the length of stay or the febrile morbidity of the patients.

Discussion

The inclusion of the eight patients who required anterior colporrhaphy may have introduced a bias in the results with regard to morbidity and hospital stay. However, it was felt that the total operative blood loss during the vaginal surgery, rather than the extent of the surgery, was the most important factor in determining the safety of performing the liposuction procedure.

A concern over the occurrence of coagulation disorders following abdominal cosmetic surgery has been expressed in the literature.[11,12] Voss et al[3] reported the occurrence of pulmonary emboli in six of 70 patients when abdominal gynecologic procedures were combined with abdominoplasties.

Although no evidence of pulmonary emboli was reported when abdominal gynecologic surgery and abdominoplasties were performed separately, others have reported an increased incidence of pulmonary emboli for abdominal hysterectomies compared to vaginal hysterectomies and abdominoplasties compared to liposuction.[6,8,11-13.] It is of interest that the group of patients who underwent vaginal hysterectomy and liposuction exhibited no abnormal coagulation factors. Of additional interest was the fact that no pulmonary emboli were seen in the group of 50 patients. Because our patients were ambulating without assistance the first postoperative day, this may have decreased their risk of pulmonary embolic phenomenon.[14-15]

The drop that occurred in hemoglobin and hematocrit values was anticipated because the average amount of fat removed in these patients was 1045 mL.[16] Likewise, it was expected that additional operating time would be needed to perform liposuction after the vaginal hysterectomy was completed. The incidence of febrile morbidity and transfusion rate compare favorably with those reported in the literature.[6,13]

Because there was no significant difference in morbidity and length of stay, this report would seem to indicate that liposuction can be safely combined with an uncomplicated vaginal hysterectomy. No liposuction patients required blood transfusion when the total amount of fat and fluid removed was less than 2000 mL. This limit may be increased with the use of autotransfusion.[17]

More and more patients demand elective cosmetic procedures combined with their medically indicated surgery, but surgeons have no objective guidelines to evaluate potential candidates. This study suggests that an uncomplicated vaginal hysterectomy may safely be combined with liposuction if the amount of fat removed is not excessive.

References

1. Kelly HA: Excision of the fat of the abdominal wall – lipectomy. *Surg Gynecol Obstet* 1910;10:229.
2. Pratt JH, Irons GB: Panniculectomy and abdominoplasty. *Am J Obstet Gynecol* 1978;132:165.
3. Voss SC, Sharp HC, Scott JR: Abdominoplasty combined with gynecologic surgical procedures. *Obstet Gynecol* 1986;67:181.
4. Goldwyn RM: Abdominoplasty as a combined procedure with added benefit or double trouble? *Plast Reconstr Surg* 1986; Sep 78 (3) : 383-384.
5. Bolsen B: Study suggests vaginal hysterectomy is safer. *JAMA* 1982;247(1):13.
6. Dicker RC, Greenspan JR, Strauss LT, et al: Complication of abdominal and vaginal hysterectomy among women of reproductive age in the United States. *Am J Obstet Gynecol* 1982;144:841.
7. Neuman J, Dolsky RL: Evaluation of 5458 cases of liposuction surgery. *Am J Cosmetic Surg* 1984;1:25.
8. American Society Plastic and Reconstructive Surgery Ad-Hoc Committee on New Procedures; 1987.
9. Grazer FM, Goldwyn RM: Abdominoplasty assessed by survey, with emphasis on complications. *Plast Reconstr Surg* 1977; (59):513.
10. Goodpasture JC, Bunkis J: Quantitative analysis of blood and fat in suction lipectomy aspirates. *Plast Reconstr Surg* 1986; 78(6):770-772.
11. Hunter GR, Crapo RO, et al: Pulmonary complications following abdominal lipectomy. *J Plast Reconstr Surg* 1983:(71):814.
12. Sladen A: Pulmonary fat embolism. *Surgical Rounds* 1980;3:46.
13. Kovac SR: Intramyometrial coring as an adjunct to vaginal hysterectomy. *Obstet Gynecol* 1986;67:131.
14. Barker NW, Nygaard KK, Walters W, et al. A statistical study of postoperative venous thrombosis and pulmonary embolism: predisposing factors. *Mayo Clin Proc* 1941;16:1.
15. McLauchlin AD, McLauchlin JA, Jory TA, et al: Venous statis in the lower extremities. *Ann Surg* 1960;152:678.
16. Teimourian B: *Suction Lipectomy and Body Sculpturing*. St. Louis, C V Mosby Co, 1987, p 696.
17. Mandel MA: Autotransfusions in elective plastic surgical operations. *Plast Reconstr Surg* 1986;77(5):767-771.

Author

S. ROBERT KOVAC, M.D.

Department of Obstetrics and Gynecology, St. John's Mercy Medical Center, St. Louis, Mo.

Reprints

S. Robert Kovac, M.D.
621 South New Ballas Rd.
St. Louis, MO 63141

A Medic Computer System Located Hundreds Of Unpaid Medical Bills.

And Not By Accident.

It's true. When a Medic Computer System replaced another in one large practice, it found thousands of dollars in bills never sent and insurance claims never filed.

Medic can help solve your cash flow problems just as easily. Since each transaction has a unique number, payments are easy to track. Our Aged Accounts Receivable Report will list overdue accounts by any amount or time frame you choose. And our Aged Insurance Claims Report even calculates the number of days since a claim was filed. So you can act before a bill gets too large or a claim gets too old.

Medic's already at work in more than 2,000 practices from coast to coast. And more than 6,000 physicians enjoy the security of a system backed by a $2.5 billion organization. Plus Texas Instruments hardware, a leader in expandability, compatibility and reliability. That makes Medic the system you can start with and stay with.

So choose a system that will turn your bottom line around. Call Medic. The specialists in computer systems for America's medical community.

Texas Instruments
Computing Products
Authorized Sales

Please tell me how Medic Computer Systems can help my practice
Name ______
Address ______
City ______ State ______ Zip ______
Phone ( ) ______ Number of physicians in practice ______
Specialty ______

Medic Computer Systems
8601 Six Forks Rd., Suite 300, Raleigh, NC 27615 3 89MM

medic
computer systems

8601 Six Forks Road, Suite 300, Raleigh, North Carolina 27615, 919-847-8102, 1-800-334-8534. Other offices: Ann Arbor, Atlanta, Austin, Boston, Chicago, Cincinnati, Dallas, Denver, Fort Lauderdale, Hartford, Houston, Jackson, Kansas City, Los Angeles, Minneapolis, Nashville, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Richmond, San Antonio, San Diego, San Francisco. Tampa.

...diagnoses that are easy to miss...

Eating Disorders. And related Mood Problems.

Anorexia nervosa, bulimia nervosa, obesity, rumination, pica. These afflictions and other abnormal eating behaviors, as well as the mood problems often related to them, are frequently beyond the training and experience of many physicians and other health care professionals. Without special, supplemental preparation, many practitioners can easily miss correct identification of these illnesses.

Attend this special conference, April 6-8

BASH℠ VII

Seventh Annual BASH℠
International Conference
On Eating & Mood Disorders

Omni International Hotel, St. Louis
April 6-8, 1989

All sessions FREE of charge.
CMEs available.

BASH℠ is an acronym for Bulimia Anorexia Self-Help and for Behavior Adaptation Support and Healing. BASH℠ is a nonprofit organization based at Deaconess Hospital, St. Louis, Missouri

The BASH℠ Expertise in These Fields

Dr. Larocca

BASH℠ is internationally prominent. It is one of the largest centers anywhere for treatment and research pertaining to eating and mood disorders. The BASH℠ staff is highly trained in these specialty areas. Félix E.F. Larocca, M.D., BASH℠ medical director, founder and president, is published widely. Under his innovative leadership, BASH℠ has been a pioneer in the "self-help" concept within eating and mood disorders fields. Deaconess Hospital in St. Louis, where BASH℠ is located, is a 527-bed state-of-the-art facility.

A special educational track will be offered to physicians and other health care professionals. The total conference will feature keynote speakers and workshops. Guest faculty members will be experts from around the world.

Join distinguished members of the medical and academic communities as they present scientific and practical information about eating and mood disorders. Guest speakers and workshop leaders will come from Argentina, Australia, Belgium, Canada, England and West Germany as well as California, Illinois, Maryland, Minnesota and Washington.

Topics included in the professional education segments will be: eating and mood disorders in young children, depression and eating disorders in primary care, chronic illness in eating disorders patients, atypical eating disorders, body-image disturbances, body-oriented therapy for patients with an eating disorder, and inpatient management of anorexia and bulimia nervosa.

Prof. Russell,
London, England

BASH℠ VII Award to Prof. Gerald F.M. Russell

Outstanding accomplishments as a researcher, clinician, academician and teacher will be recognized by presentation of the BASH℠ VII Award to Professor Gerald F.M. Russell. He is professor of psychiatry and consultant psychiatrist at the Institute of Psychiatry and the Maudsley Hospital, London, England. Professor Russell will deliver a keynote address at the conference. Also to be honored with the BASH℠ Humanities Award will be Madeleine Gómez, M.D., and Evaristo Gómez, M.D. They practice, respectively, at Ravenswood Hospital, Chicago, and Charter Barclay Hospital, Chicago.

BASH℠
Treatment and Research Center
for Eating and Mood Disorders
at Deaconess Hospital
St. Louis, MO, U.S.A.

For information, call 1-800-BASH-STL.

Early pre-registration is recommended. Reservations will be handled on a first come, first served basis. In St. Louis, call 991-BASH.

In Memoriam

■ **Edward J. Berger, M.D.**, died January 30, 1989 at the age of 78. Dr. Berger, an internal medicine specialist, practiced medicine in St. Louis for many years. He obtained his medical degree at the Washington University School of Medicine in 1937. Dr. Berger was a member of the St. Louis Metropolitan Medical Society.

■ **Nathan Bilsky, M.D.**, died January 10, 1989 at the age of 90. Dr. Bilsky, an internal medicine specialist, practiced medicine in the St. Louis area for more than 50 years. He obtained his medical degree at the University of Oklahoma College of Medicine in 1924. Dr. Bilsky was a member of the St. Louis Metropolitan Medical Society.

■ **Vilray P. Blair, Jr., M.D.**, died December 13, 1988 at the age of 75. Dr. Blair, an orthopaedic surgeon, practiced medicine in St. Louis for many years. He obtained his medical degree at the Washington University School of Medicine in 1939. Dr. Blair was a member of the St. Louis Metropolitan Medical Society.

■ **Robert J. Murphy, M.D.**, died January 14, 1989, at the age of 76. Dr. Murphy, a dermatologist, practiced medicine for 35 years before retiring in 1979. He worked at the Kansas City Health Department before going into private practice. He was a captain in the U.S. Army Medical Corps during World War II. He obtained his medical degree at Creighton University School of Medicine in 1939. Dr. Murphy was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Carl K. Ness, M.D.**, died November 4, 1988, at the age of 71. Dr. Ness, an anesthesiologist, practiced medicine in St. Joseph. Dr. Ness was a member of the Buchanan County Medical Society.

■ **Joseph M. Orenstein, M.D.**, died January 21, 1989, at the age of 83. Dr. Orenstein, an internal medicine specialist, practiced medicine in St. Louis for more than 50 years. He was on the staff of Jewish Hospital for more than 50 years; he also practiced in the tuberculosis clinic of the St. Louis Health Department. He obtained his medical degree at Washington University School of Medicine in 1930. Dr. Orenstein was a member of the St. Louis Metropolitan Medical Society.

■ **Louis A. Reuter, M.D.**, died November 3, 1988 at the age of 88. Dr. Reuter specialized in occupational medicine and practiced medicine in St. Louis, MO. He obtained his medical degree at the St. Louis University School of Medicine in 1927. Dr. Reuter was a member of the St. Louis Metropolitan Medical Society.

■ **John S. Sciortino, M.D.**, died November 28, 1988 at the age of 75. Dr. Sciortino, a general surgeon, practiced medicine in St. Louis. He obtained his medical degree at the St. Louis University School of Medicine in 1941. Dr. Sciortino was a member of the St. Louis Metropolitan Medical Society.

■ **Tommy L. Wood, M.D.**, died January 5, 1989 at the age of 33. Dr. Wood, an obstetrician/gynecologist, practiced medicine in St. Louis. He obtained his medical degree at the University of North Carolina at Chapel Hill School of Medicine in 1981. Dr. Wood was a member of the St. Louis Metropolitan Medical Society.

■ **J. Russell Vaughan, M.D.**, died January 10, 1989 at the age of 76. Dr. Vaughan, an obstetrician/gynecologist, practiced medicine in the St. Louis area for more than 40 years. He was on the staff of both St. Luke's Hospital in Chesterfield and Deaconess Hospital in St. Louis. He obtained his medical degree at the Washington University School of Medicine in 1937. Dr. Vaughan was a member of the St. Louis Metropolitan Medical Society.

No Need to Feel Helpless...

Few things elicit feelings of depression, rage, helplessness and exasperation as thoroughly as receiving suit papers for a malpractice claim. This physician suffered just such an unpleasant experience... but his odds of winning were better than most. Why? Because his professional liability insurance carrier is Insurance Corporation of America.

The circumstances of this claim could occur and have occurred in operating rooms and doctors' offices everywhere. A routine surgical procedure went sour when, for no apparent reason, the patient suffered a cardiac arrest. Prompt and proper attempts at resuscitation failed. Our physician was sued along with other

surgeons in the operating room, the primary care physician, the anesthesiologist and the hospital.

Subsequent to surgery, it was determined the patient had arrested as a result of an allergic reaction to the anesthesia. Unlike other carriers involved, who settled quickly to avoid costly "death incident" litigation, ICA recognized our physician was not at fault. Fortunately for him, ICA is dedicated to the strongest claims defense possible. And because ICA also understands that a doctor's most valuable asset is his reputation, protecting it becomes *our* bottom line.

So ICA and the doctor fought alone — and at ICA's expense. ICA in-house attorneys screened and selected local defense attorneys skilled in malpractice cases and familiar with the judicial climate of the region. Then, they planned strategy, investigated the facts, and monitored the defense.

During discovery, information was released indicating the patient had previously undergone similar surgery under anesthesia *without* incident. Because of ICA's diligence and our willingness to exhaust all legal remedies, the jury was allowed to hear the autopsy report as well as the patient's past medical history. Those defendants who settled quickly never had an opportunity to present that evidence. And ultimately our insured was exonerated.

What does this mean to the doctor? He leaves the courtroom with his reputation, his policy limits and his checkbook intact, all because of his partnership with ICA, where we put reputation, principles and dignity ahead of the quick fix. The reason why? Because ICA is people who *care*. Period.

ICA People Who Care

INSURANCE CORPORATION OF AMERICA

Houston, Texas 713 (871-8100)

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an ''A'' Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
3609 NE 62nd Terrace
Kansas City, MO 64119
816-455-3400

Amount of insurance $ ____________________

Date of Birth ____________________

Smoker/Non-Smoker (circle one)

Name ____________________

Address ____________________

City/State ____________________

Zip ______________ Phone ______________

YOCON®
YOHIMBINE HCI

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

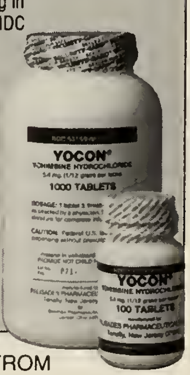
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES
PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

New Members

■ **David A. Abbott, M.D.,** 6150 Oakland Ave., St. Louis 63139, has become a member of the St. Louis Metropolitan Medical Society. Dr. Abbott received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at St. Louis University School of Medicine in 1985. He completed his residency at Deaconess Hospital, St. Louis, MO. Dr. Abbott specializes in internal medicine.

■ **Charles W. Beggs, M.D.,** Westowne III, Liberty 64068, has become a member of the Clay-Platte County Medical Society. Dr. Beggs received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1983. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Beggs specializes in general surgery.

■ **Joan C. Bender, M.D.,** Children's Mercy Hospital, 24th at Gillham Road, Kansas City 64108, has become a member of the Metropolitan Medical Society of Kansas City. Dr. Bender received her preliminary education at Vassar College and obtained her medical degree at Johns Hopkins School of Medicine in 1979. She completed her residency at Johns Hopkins School of Medicine, Baltimore, MD. Dr. Bender specializes in pediatric rheumatology.

■ **Stephen A. Bloom, M.D.,** 4949 Rockhill Road, Kansas City 64110 and 17221 E. 23rd Street, Independence, MO 64057, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bloom received his preliminary education at Clark University and obtained his medical degree at the University of Connecticut School of Medicine in 1981. Dr. Bloom completed his residency at St. Elizabeth's Hospital, Boston, MA. Dr. Bloom specializes in cardiology.

■ **Kevin D. Boatright, M.D.,** 301 W. Liberty, Farmington 63640, has become a member of the Mineral Area County Medical Society. Dr. Boatright received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1981. He completed his residency at Southern Illinois University, Decatur, IL. Dr. Boatright specializes in family medicine.

■ **Raul A. Borrego, M.D.,** 301 W. Liberty, Farmington 63640, has become a member of the Mineral Area County Medical Society. Dr. Borrego received his preliminary education at the Instituto De Enzenamza Media, Mexico and obtained his medical degree at the Universidad Autonoma De CD Juarez, Mexico in 1977. Dr. Borrego completed his residency at the VAMC, Washington, D.C. Dr. Borrego specializes in internal medicine.

■ **Elaine Z. Charles, M.D.,** 615 South New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Charles received her preliminary education and obtained her medical degree at the University of Missouri-Kansas City in 1987. She is completing her residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Charles specializes in pathology.

■ **Jonathan D. Chilton, M.D.,** 6420 Prospect, Suite T411, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Chilton received his preliminary education at Brandeis University and obtained his medical degree at the University of Rochester School of Medicine in 1982. He completed his residency at Georgetown University Hospital, Washington, D.C. Dr. Chilton specializes in neurosurgery.

■ **Ronald J. Chod, M.D.,** 777 S. New Ballas Road, Suite 100 E, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Chod obtained his medical degree at the University of Texas Southwestern Medical School in 1983. He completed his residency at Washington University, St. Louis, MO. Dr. Chod specializes in obstetrics/gynecology.

■ **Donald E. Cole, M.D.,** Dept. of Anesthesiology, Health Sciences Center, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Cole received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1983. He is completing his residency at the University of Missouri, Columbia, MO. Dr. Cole specializes in anesthesia.

■ **J. Stanley Crie, M.D.,** 5325 Faraon, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Crie received his preliminary education at Southern Methodist University and obtained his medical degree at the University of Texas Health Science Center-Dallas, Southwestern Medical School in 1974. He completed his residency at the University of Arizona Medical Center, Tucson, AZ. Dr. Crie specializes in cardiology.

■ **Thomas D. Eppright, M.D.,** Mid Missouri Mental Health Center, #1 Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Eppright received his preliminary education at Westminster College and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Eppright specializes in psychiatry.

■ **Michael W. Farrar, M.D.,** 2900 Baltimore, Suite 340, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Farrar received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1979. He completed his residency at the University of Cincinnati, Cincinnati, OH. Dr. Farrar specializes in cardiovascular disease.

■ **John R. Fitz, M.D.,** 202 B, East Columbia Street, Farmington 63640, has become a member of the Mineral Area County Medical Society. Dr. Fitz received his preliminary education at Duke University and obtained his medical degree at St. Louis University in 1982. He completed his residency at the University of Missouri, Columbia, MO. Dr. Fitz specializes in ophthalmology.

■ **Luis A. Hinojosa, M.D.,** 207 S. Market, Mt. Vernon 65712, has become a member of the Ozarks Medical Society. Dr. Hinojosa received his preliminary education and obtained his medical degree at the University of San Andres, La Paz, Bolivia in 1970. He completed his residency at St. Mary's Hospital, Rochester, NY. Dr. Hinojosa specializes in internal medicine.

■ **George J. Hruza, M.D.,** Suite 16411, One Barnes Hospital Plaza, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hruza obtained his medical degree at New York University in 1982. He completed his residency at New York University Medical Center, New York, NY. Dr. Hruza specializes in dermatology.

■ **David G. Kennedy, M.D.,** 1416 S. Big Bend, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kennedy obtained his medical degree at St. Louis University School of Medicine in 1979. He completed his residency at St. Louis University School of Medicine, St. Louis, MO. Dr. Kennedy specializes in neurosurgery.

■ **Rodney J. Landreneau, M.D.,** One Hospital Drive, Division of Cardiothoracic Surgery, University of Missouri, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Landreneau received his preliminary education at Louisiana State University and obtained his medical degree at the Louisiana State University Medical School in 1978. He completed his residency at the University of Michigan, Ann Arbor, MI. Dr. Landreneau specializes in cardiothoracic surgery.

■ **Jay A. Lednicky, M.D.,** 615 West Third Street, Lee's Summit 64063, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Lednicky received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at St. Louis University School of Medicine in 1985. He completed his residency at St. Louis University, St. Louis, MO. Dr. Lednicky specializes in internal medicine.

■ **Robert A. Luke, M.D.,** 660 South Euclid Ave., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Luke obtained his medical degree at the Johns Hopkins University School of Medicine in 1985. He completed his residency at the Johns Hopkins University Hospital, Baltimore, MD. Dr. Luke specializes in internal medicine.

■ **Sarz Maxwell, M.D.,** 114 E. South Hills Drive, Maryville 64468, has become a member of the Northwest Missouri County Medical Society. Dr. Maxwell received her preliminary education at Illinois State University and obtained her medical degree at Loyola University-Stritch School of Medicine in 1984. She completed her residency at Rush-Presbyterian-St. Luke's Medical Center, Chicago, IL. Dr. Maxwell specializes in psychiatry.

■ **Timothy I. McMurray, M.D.,** 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. McMurray received his preliminary education at the University of New Mexico and obtained his medical degree at the University of New Mexico in 1985. He completed his residency at St. Mary's Health Center, St. Louis, MO. Dr. McMurray specializes in internal medicine.

■ **James H. O'Keefe, Jr., M.D.,** Medical Plaza 11-20, 4320 Wornall Road, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. O'Keefe received his preliminary education at the University of North Dakota and obtained his medical degree at the Baylor College of Medicine in 1982. He completed his residency at the Mayo Graduate School of Medicine, Rochester, MN. Dr. O'Keefe specializes in internal medicine/cardiology.

■ **Hilton I. Price, M.D.,** 3450 Bridgeland Drive, Suite C, Bridgeton 63044, has become a member of the St. Louis Metropolitan Medical Society. Dr. Price obtained his medical degree at the University of the Witwatersrand, Johannesburg, South Africa in 1972. He completed his residency at the Johannesburg General Hospital, Johannesburg, South Africa. Dr. Price specializes in diagnostic radiology.

■ **Mark L. Prochaska, M.D.,** 6400 Prospect, #100, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Prochaska received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1984. He completed his residency at the Karl Menninger School of Psychiatry, Topeka, KS. Dr. Prochaska specializes in psychiatry.

■ **A. Razzag, M.D.,** 2118 W. Washington Ave., St. Louis 63108, has become a member of the St. Louis Metropolitan Medical Society. Dr. Razzag obtained his medical degree at the King Edward Medical College, Lahore, Pakistan in 1952. He completed his residency at Mount Sinae Hospital, New York, NY. Dr. Razzag specializes in internal medicine.

■ **Becky R. Shelton, M.D.,** 3009 N. Ballas, Suite 130, St. Louis 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Shelton obtained her medical degree at the St. Louis University School of Medicine in 1984. She completed her residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Shelton specializes in obstetrics/gynecology.

■ **Winston W. Shen, M.D.,** 1221 South Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Shen received his preliminary education at the Chen-Kung University-Taiwan and obtained his medical degree at the Taipei Medical College, Taiwan in 1970. He completed his residency at the University of New Mexico, Albuquerque, NM. Dr. Shen specializes in psychiatry.

■ **Lloyd D. Stahl, M.D.,** 4949 Rockhill Road, Kansas City 64110 and 17221 E. 23rd Street, Independence 64057, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Stahl received his preliminary education at Johns Hopkins University and obtained his medical degree at the SUNY Buffalo School of Medicine in 1981. He completed his residency at Baltimore City Hospital, Baltimore, MD. Dr. Stahl specializes in cardiology.

■ **Mary K. Stone, M.D.,** 1900 Copper Oaks Circle, Blue Springs 64015, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Stone received her preliminary education and obtained her medical degree at the University of Missouri-Kansas City in 1980. She completed her residency at Truman Medical Center, Kansas City, MO. Dr. Stone specializes in obstetrics/gynecology.

■ **Theodore M. Vollmar, M.D.,** 5701 Columbia Ave., St. Louis 63139, has become a member of the St. Louis Metropolitan Medical Society. Dr. Vollmar received his preliminary education at Washington University and obtained his medical degree at the St. Louis University School of Medicine in 1984. He completed his residency at St. Louis University Medical Center, St. Louis, MO. Dr. Vollmar specializes in radiology.

■ **David L. Yontz, M.D.,** 8182 Maryland Ave., Suite 301, Clayton 63105, has become a member of the St. Louis Metropolitan Medical Society. Dr. Yontz obtained his medical degree at Ohio State University College of Medicine in 1978. He completed his residency at Akron General Medical Center, Akron, OH. Dr. Yontz specializes in family practice.

■ STUDENT MEMBERS

Washington University

Russell Holman
Scott S. Tykodi

University of Missouri-Columbia

Robert S. Bridge
Joseph V. Meyer
Peter Montgomery
Alina Ostrovskaya
Patricia A. Smith
Kennyn Statler
Scott G. Williams

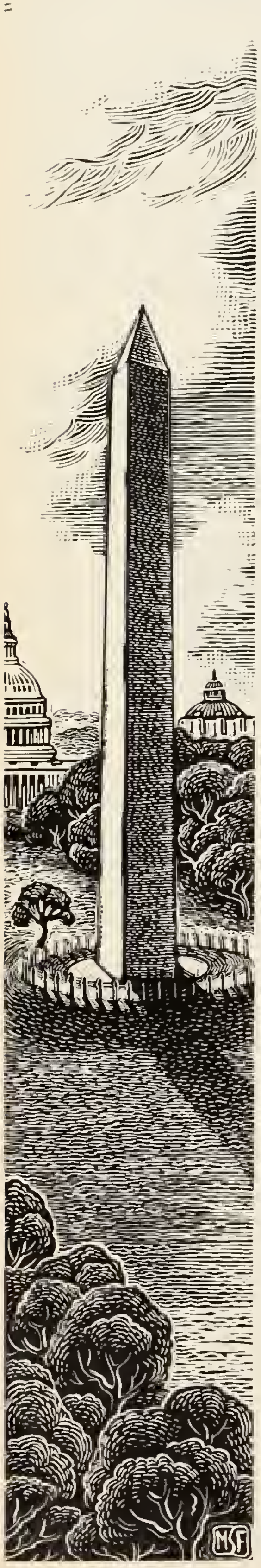
University of Missouri-Kansas City

Manal Abdelmalek
Monica Bashambu
Robert Boulware
Charles F. Carey
Leway Chen
Julie Choi
Charles T. Cunningham
Satyajeet Y. Gaekwad
Robert E. Garmon
Lisa C. Gennari
Christine M. Gregory
Carri Beth Grimes
Alina E. Huang
Laury Lemons
Warren Ong
Heather Ownby
Sandy Patel
Lynn Petty
Jerome s. Schroeder
Janice M. Spears
Patricia A. Spilker
Thomas M. Stanfield
Deborah A. Thomas
Tri Nguyen
Ronald L. Vance

WHY AMA?

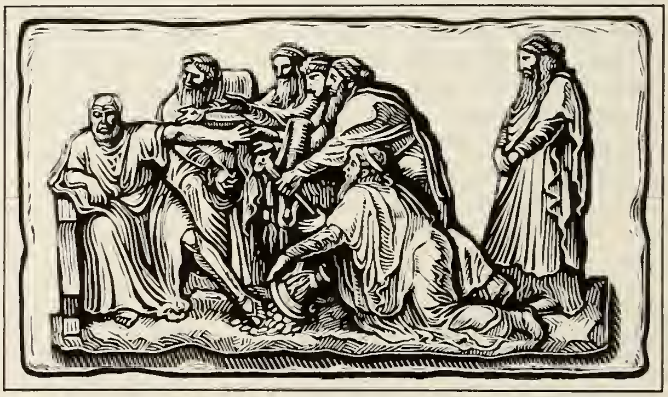
While the AMA endorses competition in health care delivery that eliminates excess cost without compromising quality, the AMA actively opposes any legislative initiatives that would reduce quality of medical services. AMA leadership in making high quality, cost effective health care available to the American public: it's one more good reason why you should be a part of the AMA.

To Join,
Contact your county or state medical society or write: Division of Membership, AMA, 535 North Dearborn Street, Chicago, Illinois 60610 or call collect, (312) 751-6196.



OVER A CENTURY AGO,

a thousand visionary physicians across the nation bestowed a commemorative stone carving to the Washington Monument. This patriotic display symbolized their unrelenting devotion to a new republic founded on freedoms—including the freedom to practice medicine for the best possible health of all its people. *Today your help is needed to restore this symbol of our profession.*



Because the commemorative stone has suffered from severe erosion and defacement, the American Medical Association is launching a campaign to raise money from physicians to restore this symbol of medicine for the National Park Service. Every contribution made to this effort will serve as a statement of each physician's personal affirmation and commitment to health and medicine in America.

Please take part in rededicating the commemorative stone as a shining example of the strength of medicine in a free and strong society. Contributors who donate $100 or more will receive a memorial replica of the carving as a token of appreciation. Send your tax deductible contribution for this timeless symbol today. Thank you.

AMERICAN MEDICAL ASSOCIATION

NATIONAL PARK SERVICE

Yes, I want to affirm my commitment to health and medicine in America. Please accept my contribution for:

________ Other

________ $100

________ $50

________ $25

Please make checks payable to:
AMA Stone/National Park Service.
Mail your payment with this form to:
AMA Stone/National Park Service
P.O. Box 109016
Chicago, Illinois 60610-9016

Name ________________

Address ________________

City/State/Zip ________________

All donations are tax deductible. All contributions will be publicly recognized in an unveiling ceremony for the new stone when it is fully restored.

Thank you for your contribution.

Medical School News

The University of Missouri-Columbia

■ **Susan P. Buckelew, Ph.D.**, assistant professor of physical medicine and rehabilitation; **Robert Conway, M.D.**, clinical assistant professor of physical medicine and rehabilitation; **Donald R. Kay, M.D.**, associate professor of immunology; and **Keith L. Buescher**, psychology intern, in November presented a paper, "Pain Behavioral Observation Method with Fibromyalgia Patients," to the combined American Pain Society and the Canadian Pain Society annual meeting in Toronto.

■ **Michael S. Cooperstock, M.D.**, associate professor of child health, in December was appointed to the U.S. Food and Drug Administration Committee on Guidelines for New Anti-Infectious Drugs.

■ **Nasrollah Hakami, M.D.**, professor of child health, is the director of a National Institute of Allergy and Infectious Diseases study of the safety and effectiveness of AZT in preventing the development of acquired immune deficiency syndrome in HIV asymptomatic hemophiliacs. Dr. Hakami also is medical director of the new Mid-Missouri Comprehensive Care Center. The state-funded center provides annual comprehensive evaluations for people with hemophilia.

■ **Stanley R. Ingman, Ph.D.**, associate professor of family and community medicine and director of MU's Center for the Study of Aging, has been awarded $19,288 from the state General Assembly. The funds will support a research project reviewed by the Advisory Board for Alzheimer's Disease and Related Disorders Program, a board appointed by Gov. John Ashcroft.

■ **Gerald T. Perkoff, M.D.**, Curators' Professor and associate chairman of family and community medicine, has accepted a position as chairman of the National Advisory Committee of the Clinical Scholars Program of the Robert Wood Johnson Foundation.

■ **Philip Rhodes, M.D.**, joined the department of child health in December as a professor. Dr. Rhodes has been director of nurseries at Children's Mercy Hospital in Kansas City. His major research interest is phospholipid metabolism.

■ **Shivendra D. Shukla, Ph.D.**, assistant professor of pharmacology, has received a one-year, $124,997 continuation of his NIH grant titled "PAF-Stimulated Phosphoinositide Turnover in Platelets."

■ **Julie A. Strickland, M.D.**, clinical instructor of obstetrics and gynecology, in November won the First-Place Award for Residents in Training for her presentation at the obstetrics section meeting during the Southern Medical Association's 82nd annual Scientific Assembly. Dr. Strickland's presentation in New Orleans, "Cesarean Hysterectomy — A Procedure for Modern Obstetrics?", was selected for the honor from among entries received in the 24 medical specialty sections representing the District of Columbia and the 16 southern states that make up the Southern Medical Association. Only three abstracts were accepted for presentation at the obstetrics section meeting.

■ **Myron L. Toews, Ph.D.**, assistant professor of pharmacology, has received a one-year, $87,117 continuation of his NIH grant titled "Mechanisms of Desensitization of Adrenergic Receptors."

■ **James M.A. Weiss, M.D., professor and** chairman of psychiatry, in January presented a daylong seminar on "The Suicidal Patient: Evaluation, Treatment and Prevention" at the Ozark Center for Mental Health. More than 40 participants from a variety of mental health disciplines participated.

■ The Mason Institute of Ophthalmology has been awarded an International Research Scholar grant to support **Shirley H. Sarks, M.D., D.O.**, of Lidcombe Hospital in Sydney, Australia, when she visits the MU School of Medicine this spring. Dr. Sarks will be involved in collaborative research activities with MU ophthalmology Professor **Lynette Feeney-Burns, Ph.D.** The two reseachers hope to determine the cellular and molecular basis for changes in macular degeneration.

■ Several members of the department of physical medicine and rehabilitation participated in the 17th annual meeting of the International Neuropsychological Society, February 8-11 in Vancouver, Canada. **Marc W. Haut, Ph.D.**, postdoctoral fellow, and **Robert G. Frank, Ph.D.**, associate professor, presented "Semantic Sensitivity After Closed Head Injury." Drs. Haut and Frank, along with graduate research assistant **John M. Chaney**, also presented "The Use of the Satz-Mogel Short Form of the WAIS-R Following Closed Head Injury."

St. Louis University

■ **John E. Morley**, M.D., will be appointed director of the new division of geriatric medicine in the department of internal medicine, St. Louis University School of Medicine, effective July 1, 1989. The announcement was made by **Dean William Stonemann, III.**

Dr. Morley comes to St. Louis University from the University of California at Los Angeles (UCLA). Since 1985, he has held the titles of professor of medicine, director of Geriatrics Research, Education and Clinical Center (GRECC), and has served as chief of geriatrics at Sepulveda Veterans Administration Medical Center and UCLA's San Fernando Valley Program.

Dr. Morley is a board certified geriatrician and endocrinologist. He is recognized as one of 300 primary cited authors in the world and has authored more than 335 publications. He is the associate editor of the Journal of the American Geriatrics Society and serves on the editorial boards of a number of journals including the International Journal of Obesity and Peptides.

After earning his M.B., B.Ch., from the University of the Witwatersrand in Johannesburg, South Africa in 1972, he completed his residency training there. Dr. Morley moved to the United States to specialize in research and clinical endocrinology at UCLA and at Wadsworth VA Hospital in Los Angeles.

Dr. Morley and his wife, Pat, have three children.

■ **Daphne deMello, M.D.**, associate professor of pathology, pediatrics and adolescent medicine at St. Louis University School of medicine, has been named a co-investigator on a five year, $1.5 million grant with investigators at Brigham and Women's Hospital in Boston.

Funded by the National Heart, Lung and Blood Institute, the study will explore the pathogenesis of infantile respiratory distress syndrome (RDS), a common cause of death in premature infants.

■ **Joseph W. Huff, Ph.D.**, assistant professor of ophthalmology at St. Louis University School of Medicine, has received a grant for $69,936 from the National Institutes of Health for his research on the swelling of the cornea. The research will be done at Bethesda Eye Institute, a School of Medicine affiliate that serves as a major tertiary care and vision research center.

Dr. Huff came to Bethesda Eye Institute and St. Louis University in 1988 from the University of Missouri-St. Louis, where he was assistant professor of optometry. He received his doctoral degree from the Medical College of Georgia.

University of Missouri-Kansas City

■ The University of Missouri-Kansas City School of Medicine's third annual Research Day is scheduled for April 21-22. In addition to faculty poster sessions and competitive student oral presentations, the itinerary will include a talk by keynote speaker **Richard M. Dubinsky, M.D.**, a 1982 alumnus. Dr. Dubinsky, who will address dystonia currently, is an assistant professor with the Department of Neurology at the University of Kansas Medical Center. He previously was a fellow with the National Institute of Neurological, Communicative Disorders and Stroke.

■ The School's Seventh Annual Alumni Reunion and Scientific Seminar is scheduled for May 19-20. All alumni are invited to attend, with the reunions of the classes of 1984, 1979, and 1974 receiving special attention. Activities will include scientific presentations, a reception at Diastole, and an alumni dinner.

■ **Dev Maulik, M.D., Ph.D.**, professor and vice chairman of the Department of Obstetrics/Gynecology was appointed chairman of the American College of Obstetrics and Gynecology's Mead Johnson Research Grants Committee for 1989, and has been appointed associate editor of **Echocardiography.**

■ **Gary A. Smith, M.D., Ph.D.**, instructor and fellow in pediatric emergency medicine, recently was named one of the Outstanding Young Persons of the World by Jaycees International. Dr. Smith was the recipient in the medicine category in recognition of his work for children's health in the United States and in developing countries. He and two other Americans were among the 10 individuals under age 40 to receive the award in a fall 1988 ceremony in Sydney, Australia. Dr. Smith also was honored in early 1988 as one of Ten Outstanding Young Americans by the U.S. Jaycees.

■ **William Barnes, Ph.D.**, professor of pathology, this fall received the Distinguished Service Award from the Southwestern Association for Clinical Microbiologists.

■ **Joseph C. Parker, Jr., M.D.**, professor and chairman of pathology, **G. Mark Repp, M.D.**, clinical instructor of pathology, and **William Barnes, Ph.D.**, professor of pathology, are co-authors of "Fungal Infections in the Brain — an Increasing Problem in the Compromised Host," which appeared in **Neuro-Ophthalmology Enters the 90's**, published in 1988 by Dutton Press.

■ **Kenneth V. Iserson, M.D.**, made a March 3 presentation as the annual Stanley Reitman, M.D., Memorial Lecturer. Dr. Iserson, associate professor of emergency medicine at the University of Arizona Health Science Center, has written widely in the areas of general emergency medicine, medical ethics, and, most recently, is author of the book, **Getting into a Residency: A Guide to Medical Students.** In addition to the Reitman lecture on the topic of "The Art and Science of Intern and Resident Selection," Dr. Iserson participated in a morning panel discussion on emergency medical ethics with **Hans Uffelmann, Ph.D.**, professor of philosophy and medicine, and a local emergency medicine physician.

■ **Angela Noto, M.D.**, assistant professor of radiology, was primary author of an article that appeared in the January issue of **Radiology**. The article was titled "Magnetic Resonance Imaging of the Ankle: Normal Variants."

■ A group of UMKC and Truman Medical Center radiologists collaborated with a UMKC/TMC orthopaedic surgeon on a presentation made at a meeting of the American Academy of Orthopaedic Surgeons in Las Vegas in February. Drs. **Angela Noto, James B. Carr, Sara Shull, Dipak C. Shah, and L. Bayer** collaborated on "Three-Dimensional Computed Tomographic Reconstruction: Normal Anatomy Fractures of the Oscalus."

■ **Zeng Shi, Ph.D.**, assistant professor of radiology, last fall presented "Analytical Approach to the Maximum MR Imaging Contract" at the World Congress on Medical Physics and Biomedical Engineering in San Antonio, Texas.

■ Senior student **Clark McKenzie** was named an Outstanding Young Man of American (OYMA) for 1988. Now in its twenty-sixth year, the OYMA program is designed to honor and encourage exceptional young men between the ages of 21 and 36 who have distinguished themselves in many fields of endeavor, including community service, professional leadership, and civic and political participation.

Washington University

■ **Saulo Klahr, M.D.,** Joseph Friedman Professor of Renal Diseases in Medicine and director of the renal division at Washington University School of Medicine in St. Louis, has been elected president of the National Kidney Foundation.

Klahr joined the faculty at Washington University in 1963 as an instructor in medicine, and became professor of medicine and director of the renal division in 1972. He is also on staff at Barnes and Jewish hospitals.

Klahr received his medical degree in 1959 from the Universidad Nacional de Colombia School of Medicine in Bogota, Colombia. He interned at Hospital San Juan de Dios in Bogota, Colombia, and served a residency in medicine with the University Hospital of the Universidad del Valle School of Medicine in Cali, Colombia.

■ **Gary K. Ackers, Ph.D.,** has been appointed the first Raymond H. Wittcoff Professor as well as head of the Department of Biochemistry and Molecular Biophysics at Washington University School of Medicine in St. Louis.

The appointment, effective July 1, 1989, was announced by **William H. Danforth, M.D.,** chancellor of the Washington University. Ackers, a molecular biophysicist, is currently on the faculty at Johns Hopkins University in Baltimore. He replaces **Carl Frieden, Ph.D.,** professor of biological chemistry, who has been acting as interim head of the department.

The Wittcoff professorship has been established by St. Louis businessman Raymond H. Wittcoff, president of the Transurban Corporation. Wittcoff is chairman of the Washington University Medical Center Board and a trustee of Washington University.

Ackers received his doctorate in physiological chemistry from Johns Hopkins University in 1964, and completed a postdoctoral fellowship at the Johns Hopkins School of Medicine.

■ Volunteers are needed for a study to see whether diabetics with poorly controlled blood sugar levels can benefit from the addition of antidepressant or antianxiety drugs to their usual regimen of diet and insulin.

The study will be directed by **Patrick J. Lustman, Ph.D.,** assistant professor of medical psychology in psychiatry. The study is open to all diabetics whose blood sugars regularly run somewhat high, whether or not they have psychological disorders.

Volunteers must be between the ages of 18 and 65. Participants will receive either nortriptylene for depression, alprazolam for anxiety, or a placebo, for eight weeks. Benefits will be assessed after that time and relayed to the patient's physician. All patients will be evaluated medically to determine their ability to participate. The evaluation, all treatment, and parking are free.

For more information, call Linda Griffith, study coordinator, at 314/362-2441.

You didn't spend umpteen years in school in order to become a bill collector.

Collecting money from slow-paying patients is critical to your practice. But you didn't spend all those years in school to become a bill collector.

And that's where I.C. System can help.

First of all, we have the resources and expertise to do the job. And while we're tenacious, we treat your delinquent patients with courtesy and respect.

In fact, our work is endorsed by over 1,200 professional associations and societies, including yours. And no matter where you're located or where your debtors live, we have local representatives to service your account.

But most important, we *guarantee* results, by collecting *at least ten times the amount of our retainer.*

To find out how the I.C. System approach can work for you, call toll free (800) 443-4123, ext. 621. In Minnesota, call (612) 483-8201, ext. 621.

I.C. System
® The System Works.™

3385-2

The Dodson Dividend Plan

A program for workers' compensation insurance that gives you the opportunity to earn a dividend at the end of your policy year, depending on claim experience.

Our Plan has been approved by the Missouri State Medical Association since 1983.

Insured MSMA members have received dividends as high as **35%**. Returns of premium now average **16.22%** per year.

With returns like these, shouldn't you insure with Dodson, too?

1-800-825-3760
Ext. 2990

underwritten by
Casualty Reciprocal
Exchange, member

DODSON GROUP
9201 State Line Road
Kansas City, MO 64114

CARAFATE®
(sucralfate) Tablets

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

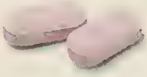
HOW SUPPLIED
CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

Reference:
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

Another patient benefit product from
PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

CAFAD276 0160N8

Carafate® for the ulcer-prone NSAID patient

Aspirin and other nonsteroidal anti-inflammatory drugs weaken mucosal defenses, which may lead NSAID users to become prone to duodenal ulcers.[1] For those NSAID users who do develop duodenal ulcers, CARAFATE® (sucralfate/Marion) is ideal first-line therapy. Carafate rebuilds mucosal defenses through a unique, nonsystemic mode of action. Carafate enhances the body's natural healing ability while it protects damaged mucosa from further injury. So the next time you see an arthritis patient with a duodenal ulcer, prescribe nonsystemic Carafate:  therapy for the ulcer-prone patient.

Unique, nonsystemic

CARAFATE®
sucralfate/Marion

CAFAD276

Please see brief summary of prescribing information, and reference on adjacent page.

0160N8

ARMY RESERVE MEDICAL PROFILE NO. 5

ROSALYN P. STERLING-SCOTT, M.D.

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

"The caliber of physicians you meet in the Army Reserve exposes you to new ways of looking at a problem. It's easy for young surgeons to become entrenched in one method, but in the Army Reserve you'll have the chance to work with outstanding physicians in your own specialty, and often learn new ideas that will help you to improve your own approach to clinical or research problems," says Dr. Sterling-Scott.

The Army Reserve can offer physicians a variety of challenging options such as teaching, research, unique training programs, and the opportunity to practice in prestigious Army medical centers.

"Joining the Army Reserve enabled me to take advantage of a number of conferences, including one at Walter Reed, where I worked with thoracic surgical colleagues, while conducting my own research project."

We understand the time demands on a busy physician. So the Army Reserve offers training programs that will allow you to be flexible about the time you serve.

For more information about specific programs, call toll-free 1-800-USA-ARMY.

ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

March

1-4 **1989 Annual Meeting of the American College of Legal Medicine** — Location: Marriott's Rancho Las Palmas Resort, Rancho Mirage, CA. Contact: the American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

3 **Cancer Pain Management: Update 1989** — Location: St. Luke's Hospital Institute for Health Education, St. Louis, MO. Contact: Laura Klaus, Director, Professional Education, American Cancer Society, 1280 Research Blvd., St. Louis, MO 63132. 314/567-9730.

4-11 **Seventh Winter Congress, Diagnostic Imaging** — Location: Courchevelle, France. Contact: Winter Congress, 21915 Roscoe Blvd., Ste. 222, Canoga Park, CA 91304. 818/700-9821.

5-10 **Magnetic Resonance Imaging Update 1989 — Winter Conference** — Location: Snowbird, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

6 **Internal Medicine Review: Dermatology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

10-11 **34th Urology Seminar** — Location: Hyatt Regency Hotel, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

11-12 **Family Practice Update** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

13 **Internal Medicine Review: Allergy/Immunology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

17 **Phonosurgery and Related Voice Disorders** — Location: The University Hospital at St. Louis University, St. Louis, MO. Contact: Lynn Frohnapfel, Department of Otolaryngology, The University Hospital at St. Louis University, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8887.

17-18 **Update on Hysteroscopy** — Location: Emerson Auditorium, St. Luke's Hospital Institute for Health Education, St. Louis, MO. Contact: Patty Fogerty, program coordinator, St. Luke's Hospital Institute for Health Education, 222 South Woods Mill Road, Suite 350 North, St. Louis, MO 63017. 314/851-6006.

18-25 **Traveling Medical Education Course** — Location: Snowmass, Colorado. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 7920 Ward Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

27 **Internal Medicine Review: Neurology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

28-29 **The Joseph E. Flynn Lectureship in Surgery** — Location: von Gontard Conference Center, St. John's Mercy Medical Center, St. Louis. Contact: Judith O'Guin, St. John's Mercy Medical Center, 615 South New Ballas Road, St. Louis, MO 63141. 314/569-6920.

28-30 **The Impact of Cardiac Surgery on the Quality of Life: Neurological and Psychological Aspects** — Location: The New York Hilton, New York, NY. Contact: Ann J. Boehme, CMP, CME Office, Long Island Jewish Medical Center, New Hyde Park, New York, NY 11042. 718/470-8650.

31-April 1 **Advanced Trauma Life Support Provider Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8365.

31-April 2 **Organizational Systems** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

April

3 **Internal Medicine Review: Oncology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

6-7 **16th Annual Obstetrics & Gynecology Symposium** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

10 **Internal Medicine Review: Hematology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

13 **Issues Facing the Diffusion of Medical Technology** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

14-15 **Midwest Conference on Eating Disorders** — Location: Hilton Plaza Inn, Kansas City. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

17 **Internal Medicine Review: Nephrology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 **Internal Medicine Review: Cardiology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

27 **Tuberculosis Update & Plans for Elimination in Missouri by 2010** — Location: St. Louis Metropolitan Medical Society Building, 3839 Lindell, St. Louis, MO. Contact: Tereasa D. Parks-Thomas, American Lung Association of Eastern Missouri, 1118 Hampton Ave., St. Louis, MO 63139-3196. 314/645-5505.

27-28 **Critical Care Update** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

1 **Internal Medicine Review: Gastroenterology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

1-13 & 15-26 **Institute on Clinical Health Care Ethics in Catholic Health Care Facilities** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: SLU Center for Health Care Ethics, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8195.

4-6 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Engel, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

4-7 **Psychiatry Legal Environment: Medicine's Response** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Internal Medicine Review: Pulmonary** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

11-17 **Medical Malpractice: Law Theory and Practice for Attorneys, Physicians and Risk Managers** — Location: Colonial Williamsburg, VA. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

12-13 **2nd Annual Advanced Contact Lens Update** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

15 **Internal Medicine Review: Rheumatology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

17-18 **Current Management in Critical Care** — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda F. Smutz, Kansas City Southwest Clincial Society, 7920 Ward Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

22 **Internal Medicine Review: Infectious Diseases** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis, MO. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 **Care of the Patient with Multiple Trauma** — Location: Embassy Suites Hotel, St. Louis, MO. Contact: Nancy Toy, R.N., 5-SICU, 3635 Vista at Grand, P,O, Box 15250, St. Louis, MO 63110-0250. 314/577-8665.

Physician's Recognition Awards

Fifty-three MSMA members qualified for the MSMA-AMA Physician's Recognition Award during January 1989. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Boone

Stephen H. Weinstein, *Columbia*

Buchanan

John S. Crie, *St. Joseph*
Wallace McDonald, *St. Joseph*
Ernest E. Weinand, *St. Joseph*

Butler-Wayne-Ripley-Carter

Subhash B. Gujarati, *Poplar Bluff*

Cape Girardeau Area

Robert F. Sacha, *Cape Girardeau*

Clay-Platte

Terry L. Calhoun, *Kansas City*
Bruce A. Kauk, *Kansas City*
Jose R. Somoza, *North Kansas City*

Cole

James L. Rea, *Jefferson City*

Franklin-Gasconade-Warren

Jerry H. Allen, *Washington*

Greene

Cecil R. Auner, *Springfield*
Lanny R. Brent, *Springfield*
Scott W. McMurray, *Springfield*

Jasper

Jon R.Bopp, *Joplin*
Ramona M. Chapman, *Joplin*
William Levanvo, *Joplin*
Margaret E. McDonald, *Joplin*

Jefferson

Chong S. Yoo, *Crystal City*

Metro Med-Greater Kansas City

Nancy L. Abdou, *Kansas City*
M. DeVonne French, *Kansas City*
James P. LaBach, *Kansas City*
Loretta S. Loftus, *Kansas City*
Ben D. McCallister, *Kansas City*
Byron A. Milgram, *Kansas City*
Carol A. Ryser, *Kansas City*
Carl F. Strauss, *Kansas City*
Bradley A. Warady, *Kansas City*
Jay H. Yedlin, *Kansas City*

Mid-Missouri

Shaw P. Wan, *Rolla*

Ozarks

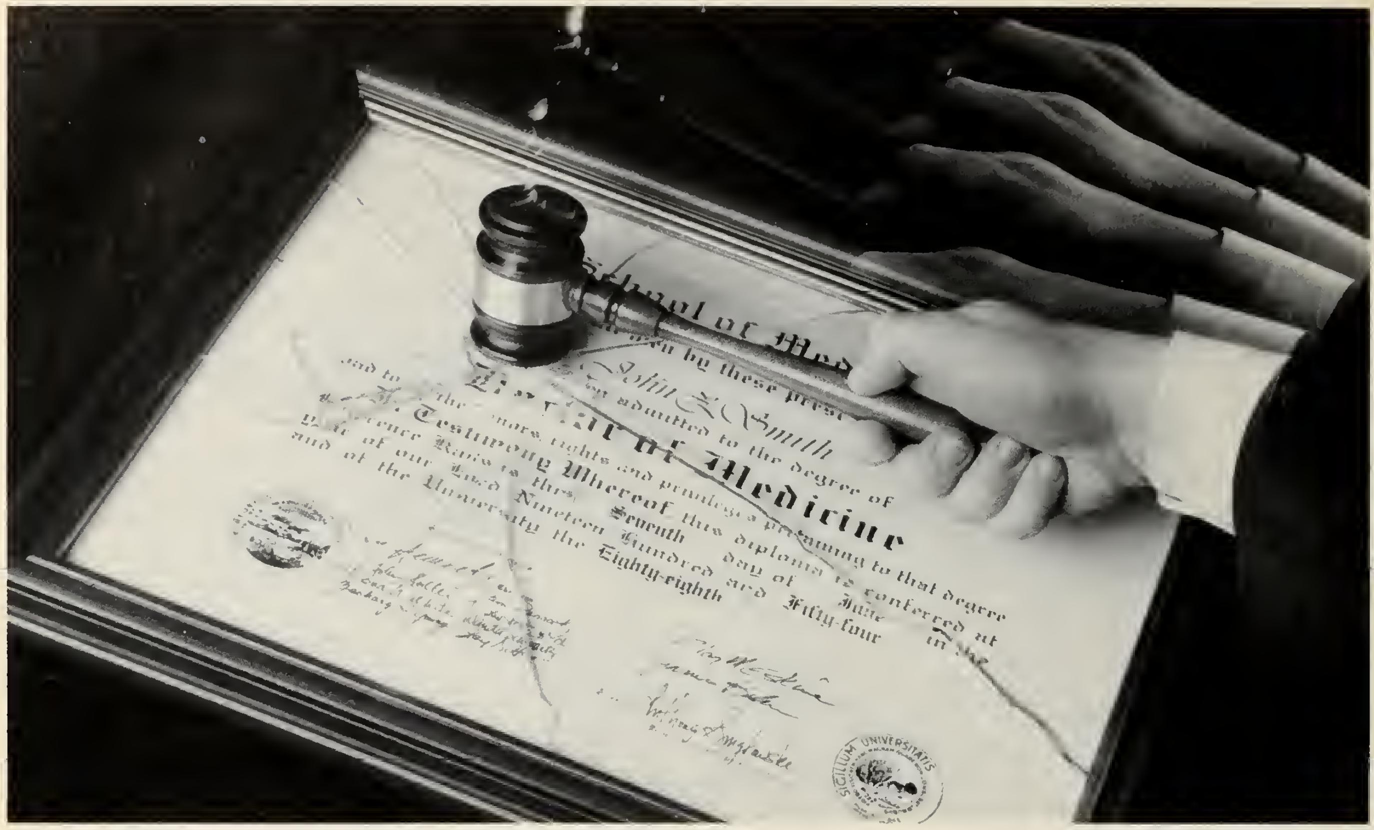
William R. Rooney, *Monett*

Perry-Ste. Genevieve

Melquiadito M. Allego, *Perryville*

St. Louis Metropolitan

Fernando Arias, *St. Louis*
Donald F. Bandle, *St. Louis*
Milagros T. R. Banton, *St. Louis*
John Douglas Blair, *St. Louis*
Shael S. Bronson, *St. Louis*
Donald J. Dickler, *St. Louis*
James E. Edwards, *Chesterfield*
Louis A. Gilula, *St. Louis*
John M. Hatlelid, *St. Louis*
Michael J. Isserman, *St. Louis*
David G. Kennedy, *St. Louis*
Barbara Kuhlengel, *St. Louis*
J. Alexander Marchosky, *Chesterfield*
Forbes A. McMullin, *St. Louis*
George E. Mendelsohn, *Chesterfield*
Robert F. Owen, *St. Louis*
Dogan H. Savci, *St. Louis*
Ravindra V. Shitut, *St. Louis*
George M. Tanaka, *St. Louis*
Garry M. Vickar, *Florissant*
Dieter H. Wurr, *Arnold*



"Cheaper Insurance" May Cost You Much More Than You Think

The financial loss in a malpractice suit is covered by most liability insurance policies. **But how do you protect your reputation?** At Risk Control Associates, we understand the high value you place on your reputation because we are physicians ourselves.

We boldly and aggressively defend non-meritorious claims, and our "Consent to Settle" clause lets you decide whether or not a claim will be settled. This means that your reputation will not be put on the line for the sake of "expediency." A convenience settlement is not in your best interest.

With Risk Control Associates, you have a choice in your legal representation. This means that you will have confidence in your legal defense. You know that your attorney is working on your behalf. With some "cheaper insurance" groups you are assigned a lawyer from a single firm that handles all cases for that group. You are not given a choice, so the lawyer really works for the insurance company — not for you.

RCA offers both Occurrence and Claims-Made coverage to all medical classes. By offering you a choice of plans and a range of liability limits, you are sure to find the coverage that best suits your practice. Our rates are competitive with comparable programs and based on **sound actuarial projections.** We offer a whole range of flexible payment options. We guarantee that **there are no hidden charges** which can suddenly appear with "cheaper insurance" programs.

Now may be the best time for you to consider your medical liability insurance needs. Risk Control Associates offers a sound, financially stable program for maximum coverage. "Cheaper insurance" sounds attractive, but look beyond the price tag. Quality demands a price, and when it comes to your reputation, you need quality protection. Risk Control Associates offers quality plans, personal service and the assurance that you have the support of "Physicians helping Physicians."

Call us today for more information or a quotation. We will gladly send it to you without obligation. Call (800) 422-5122 or (417) 862-0650.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS
1111 South Glenstone • Springfield, Missouri 65804

Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in Missouri Medicine is protected by copyright.

Manuscripts should be submitted to the editor, Donald G. Sessions, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Army **182B**

Bounds, Poger & O'Donnell **134**

Deaconess Hospital **170**

Department of Health **124**

Dodson Insurance **182**

Eli Lilly **136**

Forrest T. Jones **132**

Fred S. James **148**

I. C. System **181**

Insurance Corporation of America **172-173**

Marion Labs **182, 182A**

Medic Computer Systems **169**

Medical Defense Associates **126**

Medical Protective Company **138**

MOMEDICO **122**

Palisades Pharmaceuticals **174**

PIE Mutual Insurance Company **140**

Roche Labs **191, 192**

Risk Control Associates **186**

Springer Clinic **188**

United Missouri Banks **130**

Wes Woodbury **174**

How to recognize a quack when you see one.

uack medical products. They're everything from baldness emedies to cancer cures. All eventually prove to be a waste of ioney; many actually pose a serious threat to your health.

How do you distinguish a quack medical product from the eal thing? For a start—if it sounds too good to be true, it probbly is. Quack medical products usually claim simple solutions, iiracle cures, or amazing scientific breakthroughs. Many flaunt estimonials from satisfied users. To be sure whether a medical roduct is a quack, check with your doctor or pharmacist first. ecause the next dead duck could be you.

For a free brochure, mail to:
Quackery, HFE 55, Rockville, Maryland 20857.

NAME (please print)
ADDRESS
CITY STATE ZIP

public service message from the Pharmaceutical Advertising Council and the ood and Drug Administration

SPRINGER CLINIC

- Dermatology
- Family Practice
- Obstetrics/Gynecology
- Psychiatry
- Pulmonology

Rapid growth of Springer Clinic, a 55 member multi-specialty group, has created opportunities for BC/BE physicians in the above practices.

Competitive guaranteed salary and production incentives initially with partnership opportunities within two years.

Call (918) 495-2631 or send CV to:
Richard A. Callis, Administrator
Springer Clinic
6160 South Yale
Tulsa, Oklahoma 74136

MSMA

131st
Annual Convention

Make plans now to attend!

April 13-16, 1989
Marriott's Pavilion
St. Louis

Classifieds

Physicians Wanted

FAMILY PRACTICE/INTERNAL MEDICINE. WOMEN'S HEALTH. Multi-specialty Clinic. Full or part-time in newly established Women's Health Center. Primary care of women with time and support you need. Nurse Practitioner, Counselor, Dietitian, Wellness and Education staff. Beautiful, new full-equipped clinic. Guaranteed annual salary, generous benefits, time away, partnership after first year. Progressive community of 32,000. Draw of 150,000. Send C.V. to Mark Johnson, M.D., 810 N. Eisenhower, Mason City, IA 50401 or call 515/421-5686.

ORTHOPEDIC SURGEON — BE/BC. Progressive JCAHO hospital and medical staff located in University community of Northwest Missouri is seeking orthopedic surgeon to serve people in area with high sports interest, high percent of elderly, and documented desire and need for specialty services. Community provides hometown livability with big city accessibility. Located approximately two hours from Kansas City, Omaha, and Des Moines. Contact: Martin Goedken, VP, St. Francis Hospital, 2016 South Main Street, Maryville, MO 64468-2693 or call collect: 816/562-2600, Ext. 5001.

EMERGENCY DEPARTMENT PHYSICIAN: St. Anthony's Medical Center in South St. Louis County is seeking a physician to join the Emergency Department immediately. Our 20-bed Emergency Department provides care for 49,000 patients annually with triple physician coverage during peak hours and 24-hour pediatric coverage. An excellent salary and benefits package is offered. Contact Raana Ponstingl, M.D., Medical Director, Emergency Department, St. Anthony's Medical Center, 10010 Kennerly Rd., St. Louis, MO 63128; 314/525-1905.

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

INTERNIST — BE/BC. For progressive community in Northwest Missouri with State University. Solo or join established internist. Excellent JCAHO Hospital Facilities including CT Scanning, Ultrasound, Nuclear Medicine, Doppler Studies, Endoscopies, Cardiac Stress Testing, Holter Monitor. Good physician complement available with subspecialty representation. Contact Martin Goedken, VP, St. Francis Hospital, 2016 South Main, Maryville, MO 64468; 816/562-2600.

FAMILY PRACTICE — BE/BC. To join established practice of Obstetrician and Family Practitioner. For progressive community in Northwest Missouri with State University. Excellent JCAHO hospital facilities. Good physician complement available with subspecialty representation. Contact: Martin Goedken, VP, St. Francis Hospital, 2016 South Main, Maryville, MO 64468; 816/562-2600.

EASTERN WASHINGTON. Year-round golf, sunshine, Columbia River recreation. Community of 115,000 needs Family Medicine, Oncology, OB/GYN, Pulmonary, Neurology, Thoracic Surgery and Pediatrics. Variety of life-styles within minutes of hospital. River-front, ranching, agriculture, vineyards. Medical community adding new specialties. Practice support available. Excellent schools. Send CV or call Kathleen E. Street, The Friedrich Group, 9284 Ferncliff NE, Bainbridge Island, WA 98110, 206/842-5248.

OB/GYNs needed in several communities in Washington state. Variety of practice settings in small communities in Eastern, Central, and Western Washington and Seattle suburb. Thriving state economy due to strong airplane sales, high-tech, excellent harvest, and expanding Pacific Rim trade. Join us in the Northwest for excellent practice opportunities and life-style. Contact: The Friedrich Group, Inc., 9284 Ferncliff Northeast, Bainbridge Island, WA 98110; 206/842-5248.

FAMILY PRACTICE, INTERNIST, OB-GYN, AND PART-TIME RADIOLOGIST for multi-specialty group, outskirts of St. Louis. Please send your curriculum vitae to **File #13**, c/o of **Missouri Medicine,** 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

PEDIATRIC OR RETINAL OPHTHALMOLOGIST, Kansas City. Fellowship-trained Pediatric-Strabismus or Retinal Ophthalmologists to join board certified Generalists and establish first subspecialty department. Ultra-modern office with state-of-the-art equipment and vigorous growing practice. Some general Ophthalmology until subspecialty established. Ethical. Stimulating environment-clinical research — 40 papers published from our practice. Exceptional offer — salary, fringes, production incentive. Contact: John C. Hagan, III, M.D., FACS, Midwest Eye Institute of Kansas City, 2700 Hospital Drive, North Kansas City, MO 64116.

ONE PSYCHIATRIST — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board Certified or Eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, Board Certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time posi-

Physicians Wanted

tions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). **For information contact:** Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

EMERGENCY MEDICINE, COLUMBIA: Emergency Physician wanted for private, not-for-profit hospital in university town. Medical staff and facility are progressive and state-of-the-art. Competitive salary and benefits which include paid malpractice insurance (occurence!), health insurance, dental insurance, educational leave and one-month paid vacation. Freestanding emergency clinic and rural health clinic shifts also available. Interested physicians should send CV and letter of inquiry to Roger Willcox, M.D., FACEP, Director of Emergency Services, Boone Hospital Center, 1600 E. Broadway, Columbia, MO 65201.

MEDICAL DIRECTOR — Opening for board-certified internist and/or physiatrist as director of in/out-patient rehab programs in CARF and JCAH-accredited Missouri Rehabilitation Center. The area provides country living close to metropolitan area with Ozarks recreational opportunities. EEO/AA. Call Don Lamkins, Director, Missouri Rehabilitation Center, 600 N. Main, Mt. Vernon, MO 65712. 417/466-3711.

CME Cruise/ Conference

1989 CME CRUISE/CONFERENCES on Medicolegal Issues and Risk Management — Caribbean, Mexico, Alaska/ Canada, China/Orient, Scandinavia/ Russia, Mediterranean, Black Sea, Trans Panama Canal. Approved for 24-28 CME Category 1 Credits (AMA/PRA) and AAFP prescribed credits. Excellent group rates on finest ships. Pre-scheduled in compliance with IRS requirements. Information: International Conferences, 189 Lodge Ave., Huntington Station, NY 11746. 1-800-521-0076 or 516/ 549-0869.

Services

THINKING ABOUT SELLING YOUR PRACTICE? We have buyers and can assist in all aspects of a sale including financing and valuation. We would be happy to discuss your specific situation in an initial private meeting at no cost or obligation to you. Call, THE MEDICAL MARKETPLACE, 314/997-0535.

PHYSICIANS. PROVIDER PLACEMENT SERVICES specializes in the relocation of physicians throughout the U.S., with special emphasis in the southeast. Currently, we have several hospitals/clinics/groups with openings. All fees paid by employer. All inquiries kept in strict confidence. No obligation. Send CV/Resume to: PPS, ATTN: Mr. Scott, 2221 University Blvd., West, Jacksonville, FL 32217, or call toll free 1-800-848-8722.

Investment

$5,000-$6,000: FOR PHYSICIANS — Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including Taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Equipment for Sale

MEDICAL OFFICE EQUIPMENT from Ambulatory Care Center, that includes Laboratory and X-Ray equipment, Audio booth, Holter Monitor and large trash compactor. Used 1 ½ years. If interested call 417/869-7006. Ask for Sybil.

CYSTO AND RESECTOSCOPE SET. New in boxes. Stortz instrument. Never have been used. Will sell for less than current market price. Also have loops, cold light source, cords. Pediatric set also available. Send inquiries to: File **#24**, c/o **Missouri Medicine**, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

This publication is available in microform from University Microfilms International.

☐ Please send information about these titles:

Name

Company/Institution

Address

City

State Zip

Phone ( )

Call toll-free 800-521-3044. In Michigan, Alaska and Hawaii call collect 313-761-4700. Or mail inquiry to: University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

YOUR ROCHE REPRESENTATIVE WOULD LIKE YOU TO HAVE SOMETHING THAT WILL...

ROCHE®

... improve patient satisfaction with office visits.

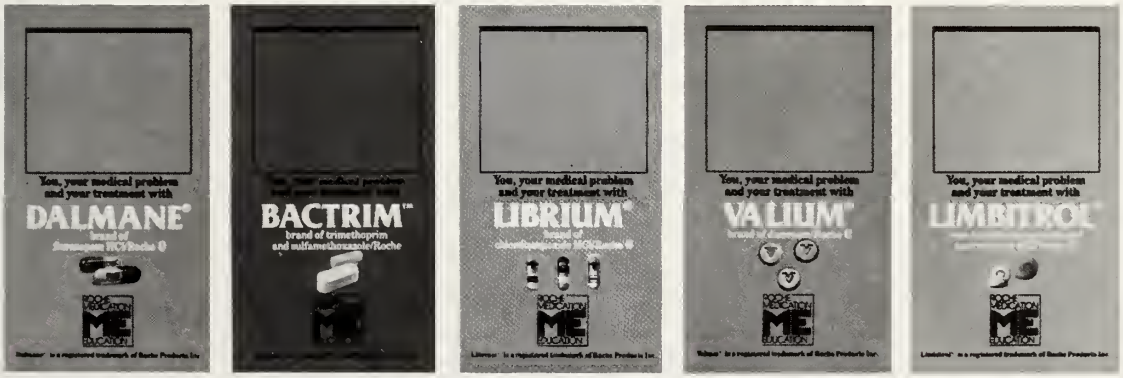
... improve patient compliance with your instructions.

... reduce follow-up calls to clarify instructions.

Roche product booklets ...

- offer a supplement to, not a substitute for, patient contact.
- support your specific instructions to the patient.
- provide a long-term reinforcement of your oral counseling.
- are available in *Spanish*.

Because you are the primary source of medical information for your patients, we invite you to look over the Roche product booklets shown below. Ask your Roche representative for the new catalog brochure of patient education materials and for a complimentary supply of those booklets applicable to your practice.


You, your medical problem and your treatment with
DALMANE®
BACTRIM™
brand of trimethoprim and sulfamethoxazole/Roche
LIBRIUM®
VALIUM®
LIMBITROL®
ROCHE MEDICATION ME EDUCATION

ROCHE MEDICATION ME EDUCATION

Working today for a healthier tomorrow

COMMITTED TO EXCELLENCE

ROCHE

PRESIDENT'S ACHIEVEMENT AWARD

Presenting the winners of the 1989 Roche President's Achievement Awards

Roche Laboratories is proud to honor these outstanding sales representatives, chosen for their unparalleled dedication to the health-care field, professionalism and consistent high level of performance. Please join us in congratulating these exceptional individuals.

James E. Outman

Richard L. Pearson

Daniel C. Stern

Mary Sweetwood

Donald P. Weaver

Turn to the preceding page and find out how your award-winning Roche representative can help both you *and* your patients.

FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

Journal of the Missouri State Medical Association

April 1989

[redacted]

11
12
13
14
15
CHECK OUT MOMEDICO!
X
X
X
17
18
19
20
21
22
X
23
24
25
26
27
28
29
APRIL
1989

APRIL 13–16 . . .

Mark Your Appointment Book, Doctor

Plan now on attending the Missouri State Medical Association's 131st Annual Convention in St. Louis this year. Stopping at the MOMEDICO booth (#6) could really pay off for you later on.

We have a free gift for you, and when you complete the registration card at our booth, you become eligible for our drawing of a unique prize. We also have waiting for you MOMEDICO literature, of vital importance to your practice. It illustrates how MOMEDICO has become the *premier* doctor-owned captive medical professional liability insurance company in Missouri. Further, it points out the many *exclusive advantages* of receiving your professional liability coverage from MOMEDICO.

We'll be looking for you at the show. Stop by and pick up your free gift. Here's hoping *you* win the MOMEDICO Grand Prize, too.

MOMEDICO

Better Protection. Together.

10795 Watson Road,
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

Contents

MSMA Phone Book

Missouri State Medical Association
314/636-5151
American Medical Association
312/645-5000
MSMA Physicians' Health Program
314/768-4990
MOMEDICO
1-800-392-8039
Dodson Insurance Group
1-800-825-3760
MSMA Retirement Plan/ E. F. Hutton
(Call collect) 314/725-9690
Forrest T. Jones
1-800-892-7272
Fred S. James
KC 1-800-892-7105
St. Louis 1-800-445-9513
Health Care Financing Administration
816/426-5233
Intrav
314/727-0500
Medicaid Provider Relations
1-800-392-0938
Medicare Provider Relations
1-800-392-3070
Medicare Part B Blue Cross Blue Shield
Kansas City
1-800-654-9629
Missouri Department of Health
314/751-6400
Missouri Department of Social Services
314/751-2086
Missouri Patient Care Review Foundation
(Preadmission) 1-800-392-8060
(General Info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs
314/751-8042
Missouri State Board of Registration of the Healing Arts
314/751-2334

Cover

Photograph of roses taken by Walter A. Schroeder, D.O., M.D., an otolaryngologist in *Cape Girardeau, Missouri.*

Guest Editorials

209 **Lady Macbeth as a Terminal Case**
William H. Crosby, M.D., *Joplin, Missouri*
211 **Solving a Wordy Mass**
Philip C. Anderson, M.D., *Columbia, Missouri*

Scientific Articles

213 **A New Method of Abdominal Exercise**
Charles J. Ash, M.D. and Thomas H. Burnett, Ph.D.
Springfield, Missouri
217 **Fetal Echocardiography**
Robert E. Henson and Michael S. Cardwell, M.D.
Columbia, Missouri
220 **Esophageal Dilation**
Leslie E. Tucker, M.D., *Washington, Missouri*

Departments

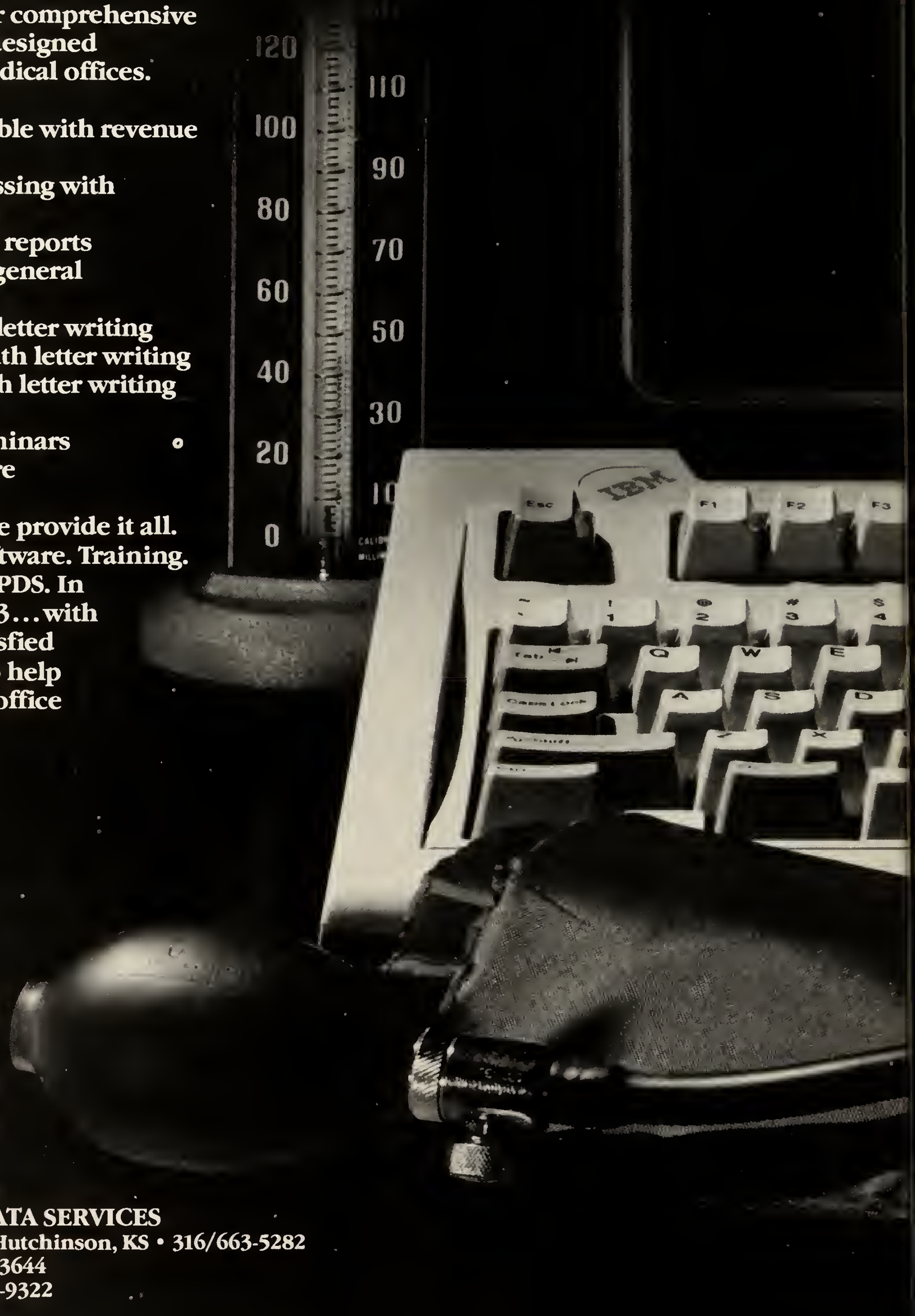
199 Progress Notes
203 Editor's Desk
205 Auxiliary Message
207 Practice Management
223 Final Disciplinary Actions
224 Physician's Recognition Award
227 Continuing Medical Education
231 In Memoriam
233 New Members
239 Medical School News
243 Information for Contributors
243 Index to Advertisers
245 Classifieds
247 Classified Advertising Form

PRESSURE.

Relieve it. With our comprehensive computer system designed specifically for medical offices.

- Accounts receivable with revenue reporting
- Insurance processing with electronic claims
- Specialized HMO reports
- Comprehensive general accounting
- Collections with letter writing
- Appointments with letter writing
- Patient recall with letter writing
- IBM hardware
- Periodic user seminars
- ...and much more

It's easy because we provide it all. IBM hardware. Software. Training. Ongoing support. PDS. In business since 1973...with more than 100 satisfied customers. PDS. To help you manage your office even better.



PDS

PROFESSIONAL DATA SERVICES
3 Compound Drive • Hutchinson, KS • 316/663-5282
Kansas City • 913/491-3644
Lincoln, NE • 402/476-9322

Missouri Medicine

Vol. 86, No. 4 *Journal of the Missouri State Medical Association* April 1989

Editor
Donald G. Sessions, M.D.
Associate Editor
Ramona M. Chapman, M.D.
Editor Emeritus
Jordan W. Burkey, M.D.
Managing Editor
Susan Flanigan Gold
Business Manager
Royal O. Cooper
Editorial Assistant
Valerie A. Peters

EDITORIAL BOARD

Anesthesiology
Mark G. Zukaitis, M.D.
Cardiovascular Surgery
Jack J. Curtis, M.D.
Dermatology
Philip C. Anderson, M.D.
John DeSpain, M.D.
Ernest Lorenc, M.D.
Emergency Medicine
David M. Trantham, M.D.
Family Practice
William D. Bradshaw, M.D.
Carl R. Kruse, M.D.
Kirby L. Turner, M.D.
Gastroenterology
Jay P. Marshall, II, M.D.
Hematology
William H. Crosby, M.D.
Internal Medicine
John S. Daniels, M.D.
Stephen Hamburger, M.D.
Robert K. Skillman, M.D.
Neonatology
Elizabeth J. James, M.D.
Neurosurgery
Keith Rich, M.D.
Obstetrics and Gynecology
James Daly, M.D.
Oncology
Michael C. Perry, M.D.
Ophthalmology
John C. Hagan, III, M.D.
F. Thomas Ott, M.D.
Orthopedics
William P. Thorpe, M.D.
Otorhinolaryngology
J. Regan Thomas, M.D.
Pathology
Scott A. Martin, M.D.
Pediatrics
R. Don Blim, M.D.
Physical & Rehabilitation Medicine
Paul E. Kaplan, M.D.
Plastic Surgery
LeRoy Young, M.D.
Psychiatry
William F. Clary, M.D.
J. C. Corvalan, M.D.
Radiation Therapy
MacDonald B. Logie, M.D.
Radiology
Donald R. Germann, M.D.
General Surgery
Mark S. Cotner, M.D.
Richard O. Craig, M.D.
Donald Silver, M.D.
Vascular Surgery
W. Kirt Nichols, M.D.
Urology
George M. Austin, M.D.

PUBLICATIONS COMMITTEE

Chairman
Donald G. Sessions, M.D.
Vice-Chairman
Ramona M. Chapman, M.D.
Members
Jack J. Curtis, M.D.
John S. Daniels, M.D.
Stephen Hamburger, M.D.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
APR 12 1989

MSMA Officers

President	T. J. Cooper, M.D., *St. Louis*
President-Elect	Marvin A. Singleton, M.D., *Joplin*
Secretary	Norman P. Knowlton, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Kenneth R. Smith, Jr., M.D., *St. Louis*
Vice President	William R. Richardson, M.D., *Union*
Vice President	Herman J. Hausheer, M.D., *Independence*
Speaker	Arlen D. Winsky, M.D., *Springfield*
Vice-Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*

Councilors

Gary A. Dyer, M.D., *St. Joseph*, Chairman
Dorothy D. Reister, M.D., *Kansas City*, Vice Chairman
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *St. Louis*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
Carol F. Williams, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Louis*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A. J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Raymond J. Caffrey, M.D., *Independence*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Evan Saunders, medical student, *St. Louis*
Charles Barbee, M.D., *Columbia*
Victoria Martin, M.D., *Shawnee Mission, KS*

Vice Councilors

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Carl R. Kruse, M.D., *Palmyra*
Meredith Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Mark W. Martin, M.D., *Lee's Summit*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Carole Matteri, medical student, *St. Louis*
William Dorzab, M.D., *Kansas City*
Charlene Prather, M.D., *Kansas City*

AMA Delegates

Robert MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*
George M. Bohigian, M.D., *St. Louis*
Melvin C. Kasten, M.D., *Cape Girardeau*
Vernon H. Balster, M.D., *St. Louis*
Walter A. German, M.D., *Springfield*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251

Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.

Subscription rates: $20 per year.

Second class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Department, P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.

Copyright © 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

AXID®

nizatidine

Enhances compliance and convenience

Patients appreciate Axid, 300 mg, in the Convenience Pak

In a Convenience Pak survey (N = 100)[1]

- *100% said the directions on the Convenience Pak were clear and easy to understand*
- *93% reported not missing any doses*

Pharmacists save time – at no extra cost

- *The Convenience Pak saves dispensing time and minimizes handling*

The Convenience Pak promotes patient counseling

- *Pharmacists dispensing the Axid Convenience Pak can encourage compliance and continued customer satisfaction*

Once nightly
Convenience Pak
AXID
nizatidine capsules
300 mg
Once nightly
Convenience Pak
AXID
nizatidine capsules
150 mg

Convenience Pak is available at no extra cost

Lilly

Eli Lilly and Company
Indianapolis, Indiana
46285

AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General* – 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests – False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine

Drug Interactions – No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy – Teratogenic Effects – Pregnancy Category C – Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers – Studies conducted in lactating women have shown that <0 1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother

Pediatric Use – Safety and effectiveness in children have not been established.

Use in Elderly Patients – Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0 2%), urticaria (0 5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine

Hepatic – Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients All abnormalities were reversible after discontinuation of Axid.

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects

CNS – Rare cases of reversible mental confusion have been reported.

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo Rare reports of gynecomastia occurred

Hematologic – Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs Rare cases of thrombocytopenic purpura have been reported

Integumental – Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity – As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported

Overdosage: Overdoses of Axid have been reported rarely The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms – There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively

Treatment – To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy Renal dialysis for four to six hours increased plasma clearance

PV 2096 AMP [013089]

Additional information available to the profession on request.

---

1. Data on file, Lilly Research Laboratories

NZ-2907-B-949310

© 1989, ELI LILLY AND COMPANY

MSMA Progress Notes

Reagen resigns

Michael Reagen, Ph.D, director of the Missouri Department of Social Services, has resigned to accept a position as president of the Des Moines Chamber of Commerce. Reagen was appointed director of the Missouri Department of Social Services in December 1986 by Governor John Ascroft. He came to Missouri after serving more than seven years as the commissioner of the Iowa Department of Human Services. Dr. Reagen's resignation was effective at the end of March. ■

AIDS report available

The Missouri Department of Health has a 39-page report titled "AIDS in Missouri, A Report to the 85th General Assembly" that is now available. Send $3.00 per copy to The Missouri Department of Health, Bureau of AIDS Prevention, 1730 East Elm, P.O. Box 570, Jefferson City, MO 65102. ■

Grandfather rules

The Tax Reform Act of 1986 imposes a 15% tax on "excess distributions" from qualified plans and IRAs. An "excess distribution" is an amount that exceeds $112,500 annually (index to inflation) or $150,000 for doctors who are eligible for the Grandfather Rule but do not elect it.

Doctors may elect to Grandfather the amounts accrued as of August 1, 1986 in all of their retirement accounts, providing the total equals $562,500.

The election is made on IRS Form 5329, which is filed with income tax returns for the 1988 tax year.

Two methods are provided in the regulations for recovering the Grandfathered amount — the discretionary method and the attained age method.

The MSMA retirement system makes available, at no cost, computer software to help you decide whether to elect and if so what method to use.

Call Michael G. Grimes, Director MSMA retirement system at 1-800/877-9200 or 1-314/721-9200 or write him at 231 S. Bemiston, Suite 1400, St. Louis, MO 63105. ■

Dr. Reece featured at Convention

Richard L. Reece, M.D., a pathologist turned publisher, editor, and consultant, will address the House of Delegates during the general session at 9:00 a.m., Friday, April 14.

After graduating from Duke University Medical School in 1960, Dr. Reece completed his internship and residency at Hartford Hospital in Connecticut. At Hartford he was editor of the *Hartford Hospital Bulletin.*

From Hartford, Dr. Reece went to Minneapolis, where for 20 years he served as pathologist at the Metropolitan Medical Center and at the Lufkin Medical Laboratories. At Lufkin he started and edited the *Lufkin Laboratory Letter*, and, in conjunction with Professor Russell Hobbie of the University of Minnesota, he developed UNIPORT, a comprehensive computer interpretation program covering more than 500 tests used in clinical laboratories.

In 1985, Doctor Reece became a publisher, editor, and consultant. He choose this career because of his experience with the *Lufkin Laboratory Letter,* his publishing of more than 600 medical articles, and his editorship of *Minnesota Medicine* from 1974 to the present. In 1986 Dr. Reece initiated the *REECE REPORT,* a subscription newsletter with 2,000 subscribers. In 1987, he and Curtis Beckmann, a radio news director, began the "Voice of Medicine", a monthly audio magazine. Since 1986, Dr. Reece also serves as editor of *Clinical Laboratory Update,* a SmithKline publication. In 1988 he published a book, "And Who Shall Care for the Sick?", a collection of essays about the Minnesota experience with managed health care. ■

Don't miss this!

April is upon us and preparation for "Pineapple Pizzazz and St. Louis Jazz" is complete. All we need now is **YOUR** participation as a donor to your medical school via AMA-ERF, or to our state student loan fund, MSMF. Your county Auxiliary president has all the information! You will want to have a "Pizzazz and Jazz" badge and donor ribbon to wear at annual meeting. Plus, your contribution of $100 will ensure that you have the award. Make your donations to AMA-ERF (designate medical school and if you want to target your money for medical excellence or student loans) or MSMF (no designation of school necessary as money goes directly for student loans). Send your donations to: Mrs. Jerry Meyer, 302 Sunset Hill Dr., Concordia, MO 64020 or Mrs. Robert Pavlu, 1200 Hillcrest Dr., Carrollton, MO 64623.

Everyone is welcome to the "Outgoing Presidents' Thank You Reception" on Thursday evening 6:00-8:00 p.m. Those who have donated to "Pizzazz and Jazz" will be honored at this time and we will all be entertained by "The Jazz Incredibles".

See you there! ■

Debate heats up on P.T. bill

The Senate Elections and General Laws Committee will take testimony on **HCS 320**, the bill which would prohibit physicians from hiring physical therapists (P.T.) or having ownership in a P.T. clinic, on **April 4** in the Senate Lounge. If your senator is a member of the Elections Committee (Sens. **John Dennis, John Scott, Richard Webster, Jim Mathewson, Phil Curls, Tom McCarthy**), contact them immediately and express medicine's opposition to **HCS 320**!

Even if your senator is not on this committee, now is the best time to let your senator know that **HCS 320** is anti-competitive, prevents valuable cooperative efforts between physicians and P.T.s and would severely restrict P.T. services in rural areas where a P.T. could not afford to set up his/her clinic without the help from a physician. Call your senator now. ■

ICD-9-C Code Books available

Physicians who need copies of the tow-volume set of ICD-9-CM Code Books for Medicare Claims can obtain them from the U.S. Government Printing Office. Only written orders are accepted and payment must accompany the order. Cost is $43.00. Send your request and check to: ICD-9-CM, Third Edition, Vols. 1 & 2, P.O. Box 360121, Pittsburgh, PA 15250-6121. ■

Join the fight against child abuse

Child abuse and neglect is a tragedy in Missouri and throughout the nation. In 1988, more than 40,000 reports of child abuse and neglect, involving 67,738 children, were made to the Missouri Division of Family Services.

April is "Child Abuse and Neglect Prevention Month" in Missouri. Consider these ideas for action:

- Become a charter member of the National Committee for the Prevention of Child Abuse.
- Contribute to the Missouri Children's Trust Fund on your state income tax return.
- Plan to attend the 10th Missouri Conference on child Abuse and Neglect, scheduled for May 3-5 in Columbia. The conference is sponsored by the Department of Social Services Division of Family Services, the Children's Trust Fund, and the Missouri Chapter of the National Committee for Prevention of Child Abuse.
- Schedule an educational presentation in your committee about child abuse and its prevention.

For more information contact: Child Abuse Prevention, P.O. Box 1641, Jefferson City, MO 65102. 314/751-5147. ■

A tax on M.D. gross receipts?

On March 13, a hearing was held for **SB 437** that would place a gross receipts tax on health care providers to fund the Medicaid program, establish a scaled-down MedAssist program with an earnings tax and establish a hospital cost data collections system. MSMA, the Hospital Association and Associated Industries testified against the bill. The Committee did not take action on the bill. Interestingly, the Department of Health testified in favor of the data collection section to the bill although they have not supported earlier identical bills.

Contact your legislators now, opposing **SB 437**. ■

Formulary funding in question

The debate continues over the "open formulary" issue. An open formulary provides Medicaid payment for any drug a physician may prescribe. Unfortunately, no additional funding is planned for this expanded coverage.

MSMA is working with Rep. Jerry Burch to draw up language for a House Concurrent Resolution which would establish a Legislative Interim Committee to investigate Medicaid reimbursement rates to **all** providers, not merely the formulary.

When talking with legislators, remind them that the resolution would result in an investigation of the formulary along with the entire woefully inadequate reimbursement rates to hospitals, physicians, dentists, etc. ■

Legislative wrap-up

At press time, the House passed **HB 11**, the Medicaid Appropriations Bill, which contains a 3% increase in physician fees, $1.5 million for CPT-4 addition and about $600,000 to increase reimbursement to physicians who handle a high volume of Medicaid OB cases.

The Senate Passed **SB 39**, which places regulations on pharmacy wholesalers, and **SB 217**, which establishes a system of registration for physician assistants, occupational therapists and respiratory care therapists.

The following bills were reported do pass by committees and sent to the floor of their respective house:

HCS 192/520, which changes the Psychologists Practice Act.

HCS 372, which establishes a state loan program for nursing students.

HB 403 which would limit the state's motorcycle helmet requirement to persons under age 21.

HCS 695, which would provide additional peer review committee protection and prevent the "corporate practice of medicine."

HCS 738/720 which would license social workers and limit the practice to those so licensed.

HCS 853 which would implement a hospital cost data collection system.

SB 283 which would liberalize the way the Board of Healing Arts can issue temporary licenses to resident physicians and visiting professors.

SB 172 which would require insurance companies to have chiropractors review claims submitted by chiropractors. ■

Construction update

The MSMA staff is temporarily situated in 115 Madison while the office at 113 Madison is being cosmetically enhanced. The photos below show the staff at work in the new building while the workmen complete 113 Madison. The offices will be ready by the end of April and MSMA will have an open house in May. ■

MISSOURI
DAW
MD
DISPENSE AS WRITTEN

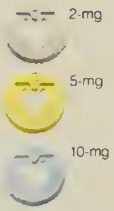
The practice is yours.
The patients are yours.
The prescriptions are yours.

Make the prescribing decision yours, too.

Sign on the right on
the "Dispense as written" line.

Specify VALIUM®
brand of
diazepam/Roche Ⓘⓥ

The cut out "V" design is a registered trademark of Roche Products Inc


2-mg
5-mg
10-mg

scored tablets

The one you know best.

Copyright © 1988 by Roche Products Inc
All rights reserved

ROCHE Roche Products
Roche Products Inc
Manati, Puerto Rico 00701

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

The issue of quality of care and rationing demand answers to questions that are difficult if not impossible to answer.

Rationing

I had my own rationing card during World War II. My family had a total of six cards and they were treated as more valuable than money. I remember seeing mine once or twice but they were combined almost immediately with everyone else's. My parents decided how best they could be used.

I recently attended a conference on Cost Containment and Quality of Care. It was about rationing. The speakers included doctors, ethicists, lawyers, business people, economists, philosophers, and a former politician. Very little was said about quality of care. That was, I suspect, because very little information is available about how effective our treatments are especially compared to a standard best or optimal treatment.

Most of the speakers talked about rationing. They didn't call it that. It was fascinating for me to listen to the speakers for the different disciplines. Each speaker had a specific form of professional jargon. We heard about altruistic externalities, cost/benefit ratios, context dependency, cross subsidization, de-insurance, budget capping, corporatization, agency risk, and quality adjusted life years. What they were talking about was rationing.

Now there has been rationing of medical care for years. The designation of hospitals into primary, secondary, and tertiary facilities is both manpower and economic rationing of medical care. It is more than just common sense that the resources needed to do heart transplants are best made available in a centralized facility. Several major events have brought this situation to our attention more recently as moral issues. The most publicized action is the decision of the British government not to fund renal dialysis in patients over age 35. More recently and closer to home is the decision by the state of Oregon to discontinue public funding for patients needing organ transplants in favor of funding 1500 children and pregnant women who had not been previously covered by the Division of Adult Services*. These are examples of political decisions regarding the rationing of medical care based on medical and economic realities. They are also essentially ethical choices that a society must make. From our vantage point in conservative middle America it is interesting to speculate what physicians in these specific situations tell their patients and their families.

The issue is coming more clearly into perspective. There simply will not be enough resources in the future to take care of all the domains of health concerns of our population from the cradle (or before) to the grave. It is clear that spending for health care will continue to rise. The total number of Medicare beneficiaries is increasing yearly. The average age of the older population is rising and the demand for medical care can only increase. Changing medical technologies, better diagnostic techniques, and improvements that enhance the quality of life for older patients will contribute to increased spending for health services. Few would suggest that the aged should forgo these benefits, especially those of us approaching that period of our lives.

The major questions are what services can be rationed and who will be making these decisions? It is here that questions of quality and

continued on page 236

In 1957, Sputnik became the first man-made earth satellite, the New York Giants moved to San Francisco and United Missouri opened its Investment Counsel Department.

United Missouri Bank announced Investment Counsel Services in '57. It didn't make national headlines. It did make a difference.

Since then, United Missouri has helped thousands of people build solid investment portfolios.

United Missouri has done it by building a large department of investment experts. These experts have offered individual attention to each customer.

They've carefully analyzed each customer's needs. They've constructed portfolios unique to each customer. And, they've offered all customers the choice to make their own decisions, or to have the bank manage their portfolios on a discretionary basis.

As a result, each United Missouri customer has witnessed consistent growth through years of economic change.

Today, United Missouri's Investment Counsel Department still makes a difference. It can make a difference for you. For your investment portfolio, call United Missouri's Stuart Murdock at 556-7340. And, pick the proven performer.

UNITED MISSOURI BANKS
Members FDIC

P.O. Box 419226, Kansas City, Missouri 64141-6226

Auxiliary Message

by Eileen Dyer
MSMAA President

If you missed this year's opportunity, plan now for the March 7, 1990 Legislative Day.

Legislation Day a success

March 1st dawned bright and clear, making travel to our state's capitol most pleasant for the Auxiliary's 1989 Legislation Day. Registration and early morning coffee allowed us to settle in for the 10:00 a.m. briefing by Tom Holloway, MSMA Director of Governmental Relations. Tom presented an overview of the key legislative issues dealing with medicine, our current stand and expected outcomes.

Red carnations were taken to each senator and representative visited, 43 of whom were then able to join us at the Capitol Plaza Hotel for lunch. The noon address was given by Lt. Governor Mel Carnahan. He stressed the need for the state to become more actively involved in the preventive health education of our young people...an effort we have always strongly supported.

The afternoon panel discussion centered on indigent and non-insured patients in the state, and was presented by representatives from the insurance industry, the hospital association, and the legislature. Clearly this problem is a critical one, and it touches multiple levels of the health care industry. Numerous bills are still under consideration for answers to this problem; the panel brought out significant considerations when looking at any legislation as a complete solution. We can be sure that much discussion and consideration is still ahead as Missouri strives to solve the financial burden, yet provide the needed care to this group of our citizens.

This valuable day of information was efficiently organized and executed by the Auxiliary legislative chairman, Mrs. Robert Wankum. Jean's bright red tulip centerpieces brightened the room for the more than 60 Auxilians and physicians who attended.

This opportunity to visit more closely with our legislators is clearly important as we look to the future of medicine. Only by our involvement, our input, our sharing the views of medicine will our representatives in Jefferson City be able to understand the medical issues under discussion. We have our patients to advocate for, our profession to defend and protect, and the quality of medicine to preserve for all.

If you missed this year's opportunity, plan now for **March 7, 1990** when we again travel to Jefferson City for this important legislative involvement for the future of medicine. ■

“I switched to occurrence coverage without paying for a tail.”

The Claims Made Trap. If you're caught in it, there's no easy way out. The only way to switch to occurrence, the coverage preferred by most doctors, was to pay an expensive tail premium. Until now.

Medical Protective, the company that invented professional liability insurance 90 years ago, has a solution. Convertible Claims Made. Now you can get back to occurrence without buying a tail.

And when you choose Convertible Claims Made with Medical Protective, you get more than just back on the road to occurrence. You get coverage with one of the most trusted and highly regarded professional liability carriers in America today. For the past 90 years, defending and insuring physicians, surgeons and dentists has been our only business. No one is more experienced or more committed. And our continuous A.M. Best A+ (Superior) rating gives you the financial stability and strength that you need and expect from your professional liability carrier.

So if you would like to escape the Claims Made Trap, look no further. Call us today and we'll show you how Convertible Claims Made makes it easy to step up to occurrence and Medical Protective.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E. Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

*Although your name will **not** be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Dear Dr. Woerth:

I have recently started my medical practice and wish to increase my patient load. Have you any suggestions on how I can achieve this?

Dr. G.S.

Dear Dr. G.S.:

There are many things a physician can do to increase his/her patient load and it all falls under the topic of marketing. First you must decide whether you want to engage in internal or external marketing. Internal marketing focuses on your existing patients. The goal is to encourage repeat business and patient referrals and to maximize patients' use of your medical services. External marketing focuses on potential patients outside of your practice. The goal of external marketing is to bring new patients into your practice.

Listed below are several basic internal marketing techniques I recommend for all my clients:

1. Be courteous and friendly on the telephone. The telephone is most likely your patient's first contact with your office. You need to leave a good impression. Encourage staff who answer the phone to standardize and rehearse the office telephone salutation.
2. Inform patients as to all the services you provide. This can be most easily accomplished via a brochure given or mailed to all new and existing patients.
3. Let patients know they are appreciated. As your patients depart have your receptionist say something like, "Mrs. Jones, Dr. Smith appreciates having you as a patient. Thanks for allowing us to take care of your medical needs."
4. Be on time and thank patients for being on time. If you are running late, inform patients immediately. Let the patient know how long he/she will have to wait and make them comfortable while they wait. The physician should always apologize to the patient when late and express concern for having inconvenienced the patient.
5. Encourage patient referrals. For example, "Mrs. Jones, we enjoy having you as a patient. If you have family or friends needing a physician, please let them know about us."
6. Periodically ask patients how you might better serve their needs. You can use a questionnaire for this or provide a suggestions box with paper and pencil in the reception area.

All these marketing techniques are aimed at making your patients feel good about your practice. If they are treated with respect and appreciation, they will return and refer patients.

Concerning external marketing, carefully consider what will be acceptable by patients and medical colleagues in your community. Listed below are several popular external marketing methods:

1. Send a formal announcement of your practice opening to medical colleagues and local pharmacists letting them know that referrals would be appreciated.
2. Place an announcement of your practice opening in the local newspaper.
3. Become involved with community activities that will increase your visibility as a physician such as health fairs, community health screenings and organizations that promote health.
4. Occasionally write a health-related article for a local news publication.

These are conservative external marketing methods. Be sure they reflect your practice image. ■

Who cares about the hassle of dealing with Medicaid?

We do. That's because Medicaid claims are our business. Our only business.

Based in Jefferson City, we serve as your personal Medicaid representative with the Division of Medical Services. If necessary, we walk problem claims all the way through the claims process.

But that's not the half of it. For providers who want more, we turn our simple paper form, which you complete, into an electronic or paper claim. We even do the coding to assure you get all the reimbursement you deserve. That's why we know — better than anyone — what your services are *really* worth.

Our computers are directly linked with GTE and General American for daily electronic filing of Medicaid and Medicare/Medicaid crossover claims. But we don't stop there. We monitor your claims all the way through the process, and we reconcile your payments with your claims.

If you're tired of the Medicaid hassle . . .
If you want to cut expenses and increase cash flow . . .
If you want to maximize your Medicaid reimbursement . . .
If you've had it with coding and turnaround claims (TACs) . . .
If you'd like to free up your staff for patient-oriented tasks . . .

Call us . . .

314-634-2218
FAX: 314-634-2708

MedClaims
THE MEDICAID SPECIALISTS
P.O. Box 54, 417 E. High, Jefferson City, MO 65102

GUEST EDITORIAL

by William H. Crosby, M.D.

The questions of a distraught and difficult patient are perceived as a challenge rather than a plea.

Lady Macbeth as a Terminal Case

At dinner my daughter, a veterinarian, exclaimed, "Some doctors just don't care for patients with terminal illness. They are passive or even brutal. Their patients complain, `My doctor won't talk to me. He looks at me and goes away.' And it's true! They don't care. They treat the patient like an animal! The patient may be dying, beyond cure, but he deserves better. He's not an animal!"

I know this is sometimes true, especially true for cancer patients. Primary physicians are glad enough to refer this loathsome disease to surgeons or oncologists and never look back. The medical profession prefers not to know what goes on in the oncology clinic. Are mistakes made? "So? He had incurable cancer — he would have died anyway." I have published many protests about the harshness of the investigational protocols for the treatment of acute leukemia especially in the elderly[1,2], pointing to a median survival of 17 days after onset of chemotherapy, suggesting that the patients would have survived longer and died no less miserably if they'd had no treatment at all. When the books were finally closed on the 1950's at Memorial Hospital it was plain as a pikestaff that the survival of patients treated with 6MP, for example, was less that of untreated controls. One time I debated at the Annual Session of the American College of Physicians. My worthy opponent smiled at my outrage. I said to him, "It was plain from the beginning what was happening." He replied, "Well, Bill, it's dirty work, but someone has to do it."

At the dinner table when my daughter exploded we had discussed the Debbie piece, recently published in JAMA.[3] "It's Over, Debbie" was an anonymous reminiscence of a gynecology house officer who was called from his bed to control the dyspnea of a twenty-year-old woman dying of ovarian cancer. He had never seen her before. In a mixed mood of irritation and compassion he injected an overdose of morphine intending to kill her, and it worked. Publication of "Debbie" was followed by a storm of letters to the editor of JAMA and of abuse in the lay press. Much of it concerned euthanasia. To me the wretched aspect of the situation was the flawed training of the house officer who did not know the rudiments of pain control. Evidently this was so because his preceptors did not know them either. The daytime doctors, the attendings and the professors, should properly have provided for the patient's comfort. They should have taught their gynecology fellows that it is possible to relieve pain and dyspnea short of committing murder.

Pain control is the most important part of the care of cancer patients, a part sometimes overlooked in oncology training programs. The importance of emotional pain is more often slighted. Young oncologists who know the world and all about vincristine and the platelet count come into practice with no perception at all about ministering to a cancer patient and his family. They continue year after year oblivious to the pain caused by their taciturnity,

continued on page 242

Medical Coverage Exclusively For Medical Professionals & Their Employees

That says it all. The MSMA $1,000,000 Major Medical Plan is specifically designed to meet the needs of today's physician . . .

- $1,000,000 lifetime maximum
- Your choice of $200, $500 or $1,000 deductible
- Coverage for a lifetime
- Affordable group rates

Most doctors don't need expensive "first dollar" medical coverage. But when those hospital costs start adding up, you do need to be sure you have a solid plan that stands behind you and your family.

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

Insured by:
The Mutual Life Insurance
of New York

CALL NOW!

National:
800-821-7303

Missouri:
800-892-7272

Kansas City:
816-756-1060

ASK FOR JAN PACEY

Clip the coupon and send it in for a free brochure.
MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on the MSMA $1,000,000 Major Medical Plan.

Name ______________________________

Address ______________________________

City ______________________________

State ______________________ Zip ______________

GUEST EDITORIAL

by Philip C. Anderson, M.D.

A true limitation of the mind has been reached. If we wish to read our own literature, some tough reforms will be necessary.

Solving a Wordy Mass

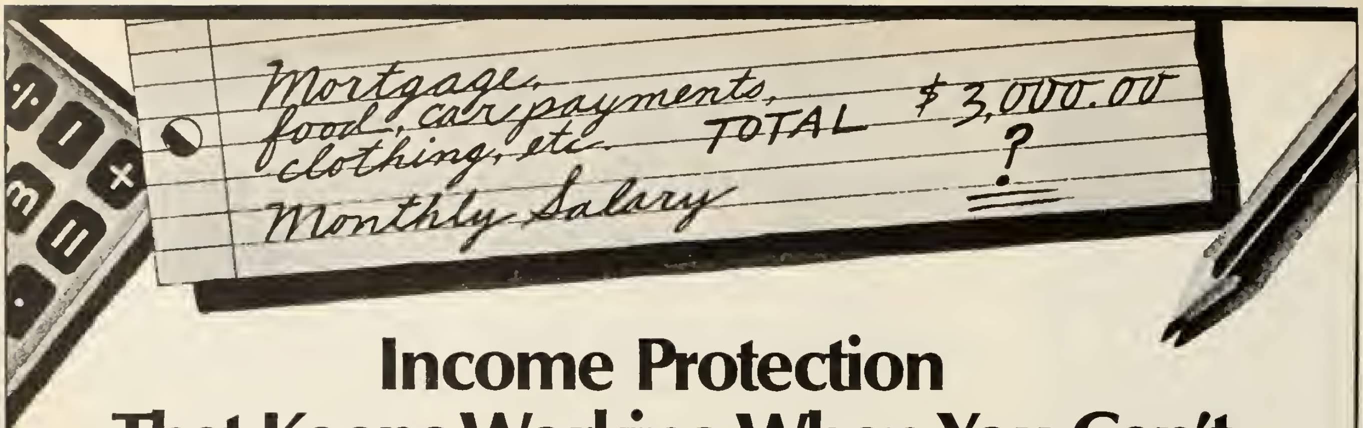
Everybody knows the medical literature can't be read. Even the specialized physician can't read all his own well-selected literature, unless he were to devote every waking moment to it. The ordinary reader will be forced to ignore about 90% of his own relevant literature each month, just for lack of time to read.

In fact, the medical literature is becoming so enormous that soon the citations during only one month will not fit any more in one traditional giant volume of Index Medicus. Needing to shelve TWO big books, what is a poor librarian to do? Worse yet, this vast wordy mass, as it rapidly grows, becomes difficult to search through even with the new fast computers and the elegant new software, such as Grateful Med 3.0 from the National Library of Medicine. Some weeding-out is necessary. A true limitation of the mind has been reached. If we wish to read our own literature, some tough reforms are necessary.

The first reform puts responsibility on the editors of those important medical journals managed by the distinguished academies. The already difficult job of the editor of a major journal takes on new burdens for upgrading quality and making more sophisticated, better integrated, much briefer presentations. Extensive shortening of their prose must be done, no matter how painful for the medical authors. As for those many papers that never should have made it into the journals in the first place, these definitely won't be found in future journals.

The busy reader deserves to be served much better; the journals need to ponder brave new methods. More often, peer review ought to enhance the quality and reliability of the journal. Change and open-mindedness are the watchwords. The second major reform concerns the new computer and the innovations of the information sciences. In this field the U.S. National Library of Medicine is leading the world. Because everyone can use the new software so easily, it is time to organize your modem and your office computer to do your own library work. The medical library of the University of Missouri has all the new systems and you could see them and learn about them here if you wish. Once again the old ways are forced to improve quickly because exciting new technology, the computer in this example, becomes commonplace in the physician's office. The cliche still applies, "Nothing will ever be the same again." ■

Dr. Anderson is professor and chairman of the Department of Dermatology at the University of Missouri—Columbia and a member of the MISSOURI MEDICINE *Editorial Board.*



Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance
programs offer you coverage and
cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: **James**
FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ____________________

Address ____________________

City ____________ State ____________ ZIP ____________

Phone: (   ) ____________ Best time to call: ____________

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

A New Method of Abdominal Exercise

Charles J. Ash, M.D., and Thomas H. Burnett, Ph.D.

Springfield, Missouri

The authors describe a new form of sit-up exercise that should isolate the abdominal muscles and eliminate the hip flexors from participation. Such an exercise should be useful in low back pain rehabilitation programs. Demonstration of the sit-up in an L1 paraplegic man, along with measurements of intra-abdominal pressures generated during exercise are also included.

Modified sit-up exercises, as prescribed in many back rehabilitation programs, seem to have limitations, including aggravation of pain, ineffectiveness, and inability to exclude hip flexor function consistently.

We describe a new method of abdominal exercise. This sit-up, performed in a supine position with the calves resting on a chair, and the hips and knees flexed 90°, may be performed with any amount of weight added as a resistive exercise and should theoretically eliminate the hip flexors from participation.

We found conflicting reports in the literature regarding intra-abdominal pressures and ranges of motion of the lumbar spine in relation to abdominal exercises. Therefore, we decided to determine normal maximum values for intra-abdominal pressures and lumbar spine flexion.

Material and Methods

One strong young subject was used to demonstrate this abdominal exercise (Fig 1). A recent L1 paraplegic with strong abdominals and poor hip flexors was identified, and a case report is submitted. Combined hip and spine flexion were measured visually with a modification of Mayer's method[1] using two very flexible young men and 48 adults with widely ranging flexibility. One normal volunteer was examined to determine abdominal pressures generated with a maximum Valsalva maneuver using a Honeywell motility probe. Measurements were taken at various locations, including oral, esophageal, gastric and colonic, then compared with maximum oral pressures measured with a mercury manometer. Maximum oral pressures were also obtained using a mercury manometer in 32 normal volunteers who expired forcibly into a small mouthpiece for one second.

Results

A flexible and muscular 26-year-old male karate student performed a sit-up with his calves resting on a chair, and his hips and knees flexed at 90°-90° (Fig 1). Maximum flexion in this position measures 45°.

Two subjects with excellent flexibility are shown demonstrating 135°-145° total flexion in the standing position (Fig 2, 3). The flexion contributed by the lumbar

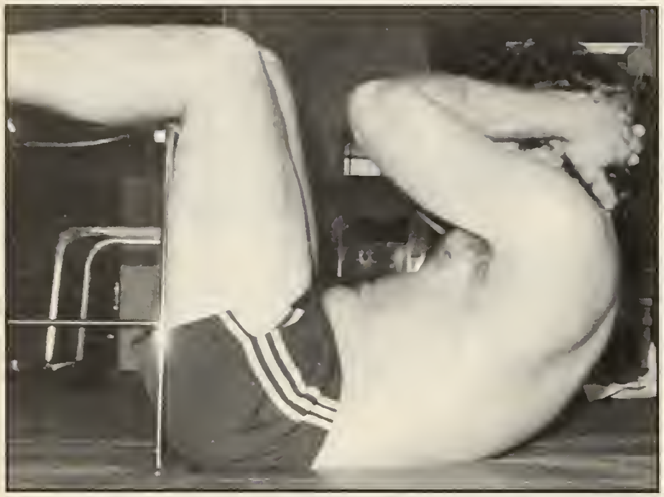


Figure 1. Demonstration of new sit-up position which eliminates hip flexors and permits isolated abdominal exercise. Lumbar flexion is 45°. Compare Fig 4.

spine using this method of measurement appears to vary between 45° and 60° (compare Fig 1). Measurements of 48 subjects' total flexion, hip flexion and spine flexion are given in Table 1.

Maximal oral pressures were found to correlate with maximum pressures in the esophagus, stomach and colon (Table 2). Maximum intra-abdominal pressures, either rectal or gastric, were significantly higher than esophageal and oral pressures. This is presumably due to diaphragmatic action. Multiple maximum oral pressures were measured (Table 3).

There appeared to be a direct relation between maximum pressures generated and abdominal muscle strength. The subject demonstrating maximum flexibility also recorded the highest oral pressure and could perform 300 standard sit-ups at a time. The four subjects registering maximum oral pressures above 150 mmHg all had very strong abdominal muscles.

Table 1
Combined forward bending movement, hips and spine

	No.	Range	Average
Average Flexion			
TOTAL	35	60-155	120
SPINE	48	30-60	44
HIPS	35	40-90	75
Maximum Flexion			
TOTAL	2	135-155	145
SPINE	2	45-60	52
HIPS	2	90-110	100

Average flexion includes all subjects. Meaximum flexion includes only the two very well-conditioned volunteers

Table 2
Maximum pressure, forced expiration, measured in one subject

Site	mmHg
Oral	140
Esophageal	140
Gastric	215
Rectal	220

Maximum pressures obtained by forced expiration with a closed system using a Honeywell motility probe

Table 3
Maximum oral pressures

No. Volunteers	35
Age Range	16-57
Range of Pressure	60-210mmHg
Average	120 mmHg

Pressures generated by forced expiration for one second into a small mouthpiece attached to a mercury manometer

Case Report

A 42-year-old man was injured in a motor vehicle accident Jan. 11, 1986. He sustained a severe injury to the thoracic aorta, requiring division and repair. He developed an L1 paraplegia with a clear sensory demarcation anteriorly and posteriorly. Except for slight return of the rectus femoris, he had no hip motor power. Lower limb and cremasteric reflexes were absent, and abdominal reflexes were present. He had vague sensation to deep pressure throughout the legs, but he could not discriminate between sharp and dull sensation below the L1 dermatome. Bowel and bladder function were not significantly impaired. Skin temperature control was impaired below the inguinal regions. He was actively participating in a rehabilitation program three times weekly, including electrical stimulation, exercises, and ambulation using parallel bars and bilateral long leg braces. There was no evidence of vascular impairment of the limbs. He was in very good condition with strong abdominal muscles.

When attempting to perform a sit-up, he is unable to elevate the lumbar spine from the mat (Fig 4). The fulcrum has been changed from the hip joint to the lumbar spine since there are no hip flexors functioning. During this maneuver, lumbar lordosis is quite impossible to develop. Total flexion of the spine is 45° (compare to Fig 1). His maximum oral pressure measured 135 mmHg, indicating strong abdominal muscles.

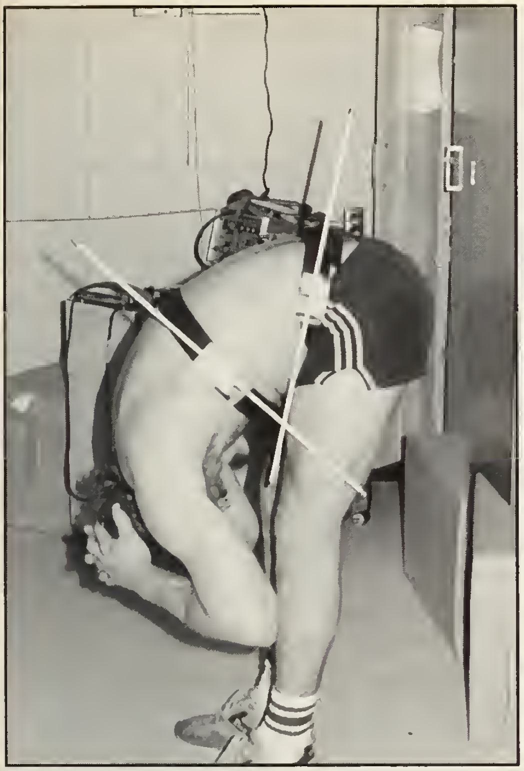


Figure 2. Subject demonstrating maximum lumbar spine flexion of 60°.

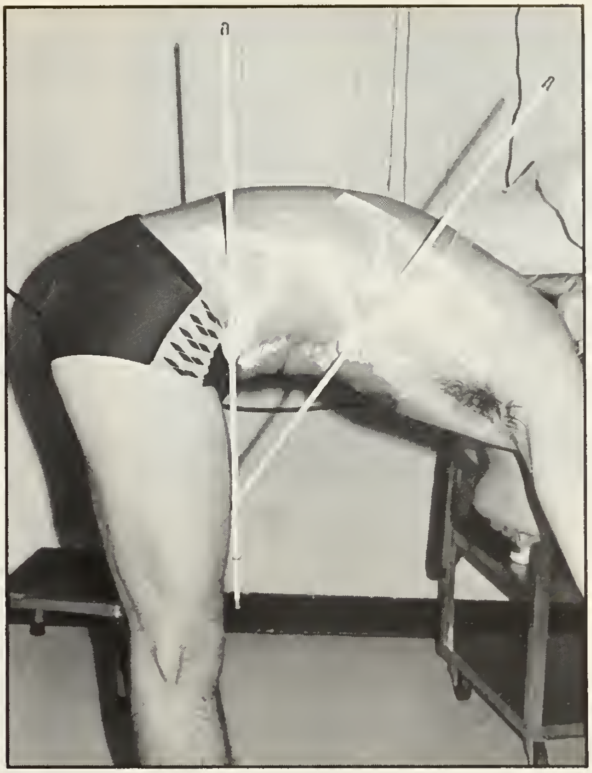


Figure 3. Subject demonstrating maximum lumbar spine flexion of 45°.

Discussion

This new exercise eliminates the hip flexors and permits only spine flexion to raise the thoracic spine from the mat (Fig 1). The weight of the calves has been eliminated, and the moment arm of the thighs has been reduced to zero, being centered directly above the hip joint. Adding weights during exercise should not alter the basic biomechanics. Comparison of the positions in Figs 1 and 2 would suggest that this motion is related to flexion of the lumbar spine by the abdominal mechanism. This exercise does not appear to produce back pain.

Measuring exertion and spine loading with abdominal pressure as suggested by Davis[2,3] has generated considerable controversy, and its use has been seriously questioned.[4-10] Measurements given as coefficients of maximum are difficult to compare with expressions of actual pressure, e.g. mmHg, kg/cm^2, or kPa (Table 4). Gracovetsky showed maximum IAP at less than 0.04 kg/cm^2, which is the equivalent of 30 mmHg[11]. Ortengren recorded a maximum IAP of 3.07 kPa (60 mmHg)[8]. This value is much lower than the values recorded in this study. This would support the concept that real abdominal straining and high pressures do not occur during heavy lifting except under extreme efforts. No other previous attempt to record normal maximal abdominal pressures was found in the literature.

When measuring maximum oral pressures with a standard mercury manometer, it appeared that maximum pressures were directly related to abdominal muscle strength. The highest pressures generated were consistently present in individuals with strong abdominals. Although not well documented, those individuals with the lowest pressures seemed to have the weakest abdominals. This method of measurement might be useful as a screening test for abdominal conditioning programs if this relationship is confirmed by additional controlled studies.

The generally accepted combined ranges of motion of the hip joints and lumbar spine have previously been questioned, and different methods of measurement of combined flexion and extension of the hips and spine have produced varying results.[1,12] This study indicates that maximal lumbar spine flexion varies between 30° and 60°, with an average of 45.3°, whereas standing hip flexion varies markedly and is directly related to flexibility, ranging up to 110°. These results support Mayer's original measurements.[1]

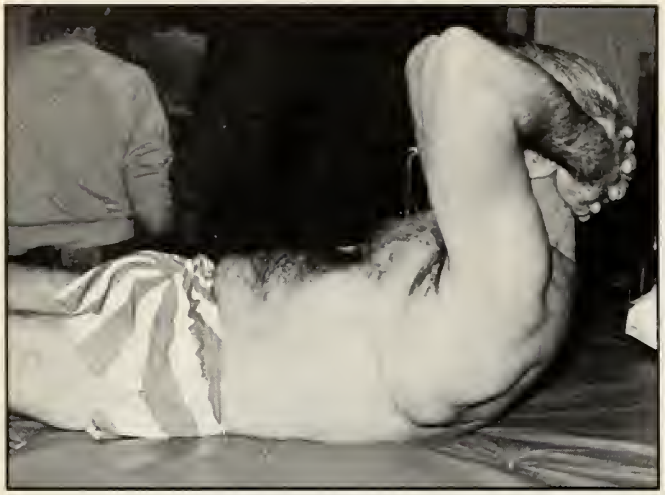


Figure 4. Maximum sit-up of an L1 paraplegic with strong abdominal muscles and poor hip flexors. Maximum lumbar flexion is 45°. Compare Fig 1.

Table 4
Pressure conversion chart

Pascal	KiloPa	MegaPa	mmHg	Kg/cm^2	lb/in^2
1.0			.0075		.000145
1000.0	1.0	0.001	7.5	.0102	0.145
	100.0	0.1	750	1.02	14.5
	13.33		100	0.136	1.933
101325	101.325	0.101325	760	1.0335	14.7

One Pascal equals one Newton/meter^2
One Newton equals 0.2248 pounds
One kilogram equals 9.807 Newtons

Conclusion

A sit-up exercise is described that isolates the abdominal musculature from the hip flexors. It permits light or strenuous abdominal resistive exercises without apparent lumbar strain. This is a preliminary report and requires further clinical evaluation. This exercise may be applicable to low-back rehabilitation programs.

Maximum oral pressures measured with a mercury manometer appear to be directly related to maximum intra-abdominal pressures and abdominal strength, and may be an accurate and convenient measure of abdominal conditioning.

References

1. Mayer TG: Rehabilitation of the patient with spinal pain. *Orthop Clin North Amer* 1983;14:623-639.
2. Davis PR: The use of intra-abdominal pressure in evaluating stresses on the lumbar spine. *Spine* 1981;6:90-92.
3. Fairbank JC, O'Brien JP, Davis PR: Intra-abdominal pressure rise during weight-lifting as an objective measure of low-back pain. *Spine* 1980;5:179-184.
4. Hemborg B, Moritz U: Intra-abdominal pressure and trunk muscle activity during lifting. II: Chronic low-back patients. *Scand J Rehab Med* 1985;17:5-13.
5. Hemborg B, Moritz U, Lowing H: Intra-abdominal pressure and trunk muscle activity during lifting. IV: The causal factors of the intra-abdominal pressure rise. *Scand J Rehab Med* 1985;17:25-38.
6. Hemborg B, Moritz U, Hamberg J, et al: Intra-abdominal pressure and trunk muscle activity during lifting. III: Effect of abdominal muscle training in chronic low-back patients. *Scand J Rehab Med* 1985;17:15-24.
7. Hemborg B, Moritz U, Hamberg J, et al: Intra-abdominal pressure and trunk muscle activity during lifting - effect of abdominal muscle training in healthy subjects. *Scand J Rehab Med* 1983;15:183-196.
8. Nachemson AL, Andersson BJ, Schultz AB: Valsalva maneuver biomechanics: Effects on lumbar trunk loads of elevated intra-abdominal pressures. *Spine* 1986;11:476-479.
9. Ortengren R, Andersson GB, Nachemson AL: Studies of relationships between lumbar disc pressure, myoelectric back muscle activity, and intra-abdominal (intragastric) pressure. *Spine* 1981;6:98-103.
10. Ricci B, Marchetti M, Figura F: Biomechanics of sit-up exercises. *Med Sci Sports Exer 1981;13:54-59.*
11. Gracovetsky S, Farfan H, Helleur C: The abdominal mechanism. *Spine* 1985;10:317-324.
12. Keeley J, Mayer TF, Cox R, et al: Quantification of lumbar function. Part 5: Reliability of range-of-motion measures in the sagittal plane and an in vivo torso rotation measurement technique. *Spine* 1986;11:31-35.

The Authors

CHARLES J. ASH, M.D.
THOMAS H. BURNETT, Ph.D.

The authors are from the Center for Scientific Research and the Department of Health, Physical Education and Recreation at Southwest Missouri State University, Springfield. Dr. Ash is also affiliated with St. John's Regional Health Center, where he did most of his research in the physical therapy department, and Lester E. Cox Medical Center, Springfield.

The authors acknowledge the assistance of Carl Mentgen, M.D., of the Department of Endoscopy, Lester E. Cox Medical Center, and Jorge Padron, Ph.D., of Drury College, Springfield.

Reprints

Charles J. Ash, M.D.
308 Medical Tower
1443 N. Robberson
Springfield, Missouri 65802-1991

Fetal Echocardiography

Management of Suspected Congenital Heart Disease

Robert E. Henson and Michael S. Cardwell, M.D.
Columbia, Missouri

As prenatal ultrasound and echocardiographic imaging become more commonplace, prenatal diagnosis of serious cardiac conditions becomes possible. A case report points out the importance of establishing a firm diagnosis before undertaking definitive treatment after birth.

The prenatal diagnosis of fetal cardiac anomalies incorporating prenatal ultrasonography and fetal echocardiography is a relatively recent and important development.[1,2] These techniques have become established as reliable tools for studying normal and abnormal cardiac anatomy and dynamics. The prognosis of various abnormalities depends on their amenability to life support measures or surgical correction.[3] It is vital, then, when making case management decisions that the cardiac diagnosis be as specific as possible.

In a previous study,[4] an abnormal fetal echocardiogram predictive of congenital heart disease was found in 8% (19/227) of cases. Of these, the diagnosis was completely correct in 74% and partially correct in 21%. One false positive occurred. The following case illustrates the management of such a partially correct diagnosis.

Case Report

A 25-year-old woman, gravida 1, para 0, with a previously normal ultrasound evaluation performed at 21 weeks gestation for dating purposes, had a repeat scan at 31 weeks because of pre-term labor and decreased reactivity on external fetal heart monitor. Fetal ascites and cardiomegaly were present. Detailed fetal echocardiographic examination revealed a large, dilated right ventricle and large right atrium. A small left atrium and left ventricle were visualized. The hypoplastic left ventricle syndrome and Ebstein's anomaly were considered diagnostic possibilities. Table 1 summarizes the various findings obtained with fetal echocardiography.

Consultants in thoracic surgery, genetics, pediatric cardiology, neonatology, and perinatology jointly concluded that the fetus was affected with a near-lethal condition with few viable therapeutic options besides postnatal cardiac transplantation and the Norwood procedure. Both of these procedures are experimental, with few long-term successes.[5] The prognosis and therapeutic implications of the diagnosis were explained to the parents. The parents elected to discontinue tocolysis and asked that no heroic measures be performed on the fetus' behalf. The mother was discharged and scheduled for weekly ultrasound examinations.

The repeated ultrasound examinations were significant for increasing fetal ascites and cardiomegaly. An ultrasound examination performed at 34 weeks' gestation revealed an enlarging fetal heart and decreased fetal

Table 1
Fetal Echocardiographic Report

	Patient	Normal
Right ventricle anterior wall	3.1 mm	0.9 mm
Right ventricle dimension	15 mm	4.0 mm
Left ventricle diastolic dimension	47 mm	5.0 mm
Left ventricle systolic dimension	34 mm	5.0 mm
Left ventricle dimension change	30 mm	6.0 mm
Intraventricular septum	9.0 mm	2.5 mm
Left ventricle posterior wall	9.0 mm	2.0 mm
Intraventricular septum/Left ventricle posterior wall ratio	1.04	0.15
Left atrium	29 mm	5.0 mm
Aortic root	27 mm	5.0 mm
Left atrium/Aortic outlet ratio	0.98	0.15

activity. Repeat ultrasound examination the following week showed a markedly enlarged fetal heart occupying approximately 80% of the chest cavity. The estimated fetal weight was greater than the 90th percentile for 36 weeks. Fetal ascites had resolved somewhat, but the amniotic fluid volume had increased. Fetal scan at 37 weeks showed an estimated fetal weight at the 85th percentile with resolving fetal ascites and normal amniotic fluid volume.

The mother was admitted to the hospital at 38 weeks' gestation for elective induction of labor so that the full obstetrics-neonatology-pediatric cardiology team would be available. Resuscitation and life support measures were felt to be necessary until the diagnosis was secure. Delivery would be attempted vaginally, with cesarean section an option for maternal indications only.

A cyanotic female infant weighing 2,940 g with Apgar scores of 5 and 7 at one and five minutes respectively was delivered vaginally with low forceps and resuscitated by oxygen bag/mask, then oxygen hood. The infant was admitted to the neonatal intensive care unit and intubated. Echocardiography performed shortly after birth was felt to show a single left ventricle with double inlet and transposition of the great vessels. The baby was placed on a regimen of digitalis, furosemide and prostaglandin infusion to keep the ductus open, as the lesion was judged to be ductus-dependent. The following morning, cardiac catheterization revealed a single ventricle with a single Ebstein's type atrioventricular valve with massive regurgitation; a single atrium; D-transposition of the great arteries with hypoplasia of both pulmonary and aortic valves and vessels; and a patent ductus arteriosus. No viable therapeutic options were available to treat this sort of congenital abnormality. In keeping with the parents' wishes, life support measures were terminated at 36 hours of age, and the infant died shortly thereafter.

Discussion

This case illustrates both the difficulty in establishing a precise prenatal diagnosis and also the fact that fetal cardiac abnormalities may not be apparent on earlier routine prenatal scans. We found the serial ultrasound examinations interesting in the apparent accommodation of the fetal heart to its serious defect and the resulting resolution of the severe heart failure present at 33-35 weeks. We would note that there is a report of a 7-year-old child living with hypoplastic left heart syndrome, without surgical intervention.[6]

Prenatal diagnosis with fetal echocardiography was important in the obstetrical management of this patient in several areas: the parents were better prepared for the strong possibility of the loss of their child; the route and timing of the delivery were optimized; prompt evaluation of the anatomic defects was possible after delivery; and treatment teams were informed and prepared.

Also emphasized in this case study is the ever-present realization that our diagnostic techniques are not always completely diagnostic nor entirely accurate. Definitive diagnosis should always be attempted before undertaking definitive therapy. Within the past several years, fetal ultrasound screening for congenital heart disease has become more widely practiced. It has valuable utility as a screening tool, with positive test results significantly affecting obstetrical management.

References

1. Cartier MS, Emerson D, Plappert T, et al: Hypoplastic left heart with absence of the aortic valve: Prenatal diagnosis using two-dimensional and pulsed Doppler echocardiography. *J Clin Ultrasound* 1987;15:463.
2. Yagel S, Mandelberg A, Hurwitz A, et al: Prenatal diagnosis of hypoplastic left ventricle. *Amer J Perinatol* 1986;3(1):6.
3. Crawford DC, Chita SK, Allan LD: Prenatal detection of congenital heart disease: Factors affecting obstetric management and survival. *Am J Obstet Gynecol* 1988;159:352.
4. Pilu G, Baccarani G: Prenatal diagnosis of cardiac structural abnormalities. *Fetal Therapy* 1986;1:86.
5. Pigott JD, Murphy JD, Barber G, et al: Palliative reconstructive surgery for hypoplastic left heart syndrome. *Ann Thorac Surg* 1988;45:122.
6. Ehrlich M, Bierman FZ, Ellis K, et al: Hypoplastic left heart syndrome: Report of a unique survivor. *JACC* 1986;7(2):361.

The Authors

ROBERT E. HENSON
MICHAEL S. CARDWELL, M.D.

Mr. Henson is a fourth-year medical student at the Missouri University School of Medicine, Columbia, where Dr. Cardwell is an assistant professor in the Department of Obstetrics and Gynecology.

Reprints

Michael S. Cardwell, M.D.
Department of Obstetrics and Gynecology
N606 University of Missouri
Health Sciences Center
1 Hospital Drive
Columbia, Missouri 65212

Esophageal Dilation

Six-Year Experience in a Small Community Hospital

Leslie E. Tucker, M.D.
Washington, Missouri

The results of this review indicate esophageal strictures can be effectively and safely managed by dilation in the community hospital setting.

Esophageal dilation is the preferred management for esophageal strictures.[1,2] Surgery is necessary in a minority of cases. I report the results of 103 consecutive patients undergoing dilation for esophageal stricture at a 165-bed community hospital.

Methods

A prospective study of 103 consecutive patients undergoing esophageal dilations at St. John's Mercy Hospital, Washington, Mo., from September 1982 to September 1988 was done. All dilations were performed by the author. All procedures performed after February 1983 (95% of the total) utilized fluoroscopy. Dilations were done with the patient in the left lateral decubitus position. In all, 508 dilations were done. Dilators used were Maloney (398; 76%), Eder-Puestow (73; 14%), Savary (41; 8%), and Thru-the-Scope Balloon Dilators (5; 1%). Cetacaine throat spray was given, as well as meperidine and diazepam, but in minimal dosages. All Schatzki rings were dilated to at least a 54 French size. Peptic strictures were dilated to a minimum of 44 French size, with a mean dilation size of 53 French. Dilations were done every three to seven days until the desired lumen size was achieved. Most procedures were terminated once a 54 French diameter was achieved.

All patients were followed-up at yearly intervals. Strictures were classified as being peptic (if esophageal erosions or ulcerations were noted endoscopically), or Schatzki ring (if a typical endoscopic appearance was present). A detailed drug history was done, and patients with possible drug-induced esophagitis were excluded.[3] Twenty-four hour pH probe studies were not done.

Results

The patients ranged in age from 15 to 91 years, with a mean age of 64. There were 52 men and 51 women. The cause of stricture formation was peptic in 61 cases, Schatzki ring in 37 cases, web in one case (one patient had both a cervical web and peptic stricture), cancer in two cases, and post-surgical stricture in three cases.

Successful treatment was defined as the resolution of dysphagia, with the patient subsequently being able to eat normally. Mean length of follow-up on our patients was 26 months. Forty-five of 51 patients with peptic strictures (88.2%), observed for longer than six months, had successful dilation. Seventeen (33%) of these patients required redilation for control of recurrent dysphagia (Table 1). Of these, two-thirds underwent redilation within the first two years of follow-up (Table 2). Two patients (3.9%) had frequent reformation of their strictures, but were not operative candidates. They were managed with frequent dilation, every three to four months as needed. Four patients (7.8%) underwent surgery, one because of stricture refractory to dilation. This patient had a severe stricture in a Barrett's esophagus, necessitating resection and colon interposi-

Table 1
Results of treatment of 51 patients with peptic stricture observed for six months or longer

Relief of Dysphagia	Number	Percent
Initial Dilation	30	88.2
Redilation	15	
Serial Dilations	2	3.9
Surgery		
Stricture-related	1	7.8
Non-stricture related	3	

Table 2
Interval for redilation in 51 patients with peptic stricture

Years	1	2	3	4	5	
No. of Patients	6	5	2	3	1	17
Cumulative %	35	64	76	94	100	

tion. The other three patients underwent Nissen fundoplication for symptoms of reflux, but not for recurrent stricture.

All patients with a Schatzki ring were treated successfully. Four of 32 patients (12%) who were observed longer than six months required redilation.

Two complications occurred in 508 dilations, giving a morbidity of 0.4%. One patient developed a cervical perforation after dilation of a Schatzki ring with a 56 French Maloney dilator. This patient was treated with cervical drainage and did well. Another patient developed hematemesis after dilation of a peptic stricture with a 54 French Maloney dilator. His bleeding stopped spontaneously, and he did not require transfusion. Our single perforation occurred in the absence of fluoroscopy. Since that time, all procedures were done under fluoroscopic guidance.

Discussion

Our success rate for relief of dysphagia due to peptic strictures (88%) is similar to other series.[4,5] Thirty-three percent of patients with peptic strictures needed redilation, but this was easily accomplished. The need for surgery in this series of patients was low.

All patients with Schatzki rings obtained relief, and the need for redilation was rare. The morbidity of 0.4% compares well with the reported risk of four to six complications per 1,000 dilations.[5,6] Our sole perforation occurred before we used routine fluoroscopy during the dilation procedure. Since beginning routine fluoroscopy, I have been impressed with how frequently at the time of dilation one sees the tip of the dilator or guidewire wedge into the diverticulum or esophageal wall, or turn around in a large hiatal hernia, thus failing to traverse the stricture. For this reason, we now use fluoroscopy in all our cases except those in which the through-the-scope balloon dilators are used. Because of the expense, however, I seldom use the latter.[7] We have also found the new Savary dilators to be far superior to Eder-Puestow dilators and no longer use this latter system.

In summary, I believe esophageal dilation of peptic strictures and Schatzki rings can be done safely and effectively in a small community hospital setting.

References

1. Graham DY: Dilatation for the management of benign and malignant strictures of the esophagus, in Silvis SE (ed): *Therapeutic Gastrointestinal Endoscopy*. New York, Igaku-Shoin, 1985, pp 1-30.
2. Webb WA, McDaniel L, Jones L: Endoscopic evaluation of dysphagia in 293 patients with benign disease. *Surg Gynecol Obstet* 1984:152-156.
3. Bonavina L, DeMeester TR, McChesney L, et al: Drug induced esophageal strictures. *Ann Surg* 1987;206:173-183.
4. Wesdorp IC, Bartelsman JF, den Hartog Jager FC, et al: Results of conservative treatment of benign esophageal strictures: A follow-up study in 100 patients. *Gastroenterol* 1982;82:487-493.
5. Patterson DJ, Graham DY, Lacey Smith J, et al: Natural history of benign esophageal stricture treated by dilatation. *Gastroenterol* 1983;85:346-360.
6. Silvis SE, Nebel O, Rogers G, et al: Endoscopic complications: Results of the 1974 American Society of Gastrointestinal Endoscopy Survey. *JAMA* 1976;235:928-930.
7. Kozarek RA: To stretch or to shear: A perspective on balloon dilators. *Gastrointest Endoscop* 1987;33:459-460.

The Author

LESLIE E. TUCKER, M.D.

Dr. Tucker is in the private practice of internal medicine and gastroenterology in Washington, Missouri.

Reprints

Leslie E. Tucker, M.D.
800 East 5th Street
Washington, Missouri 63090

PIE's quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. PIE Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

QRP FACTS:

Strict Underwriting Criteria – Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

Scheduled Premium Reductions – Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

High Limits – Backed by our reinsurer, Lloyd's of London, PIE is able to offer higher coverage limits for qualifying doctors: up to $5 million for individual doctors and $7.5 million for group policies. Lloyd's of London is the largest reinsurer in the world.

Designed With Input from Doctors – PIE's QRP plan is an innovative modified claims-made insurance specially designed with input from PIE-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your PIE representative, or our headquarters office today.

The PIE Mutual
Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth Street
Cleveland, OH 44114
(216) 781-1087

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

Final Disciplinary Actions

At the December 2-3, 1988 meeting of the State Board of Registration for the Healing Arts, the following final disciplinary actions were taken. In addition, the listing includes two reportable actions finalized since the May 20-21, 1988 meetings and three reportable actions finalized since the August 19-20, 1988 meetings that were not included in the last published listing (pg. 41, January 1989 MISSOURI MEDICINE). This information is made available to the public under the provisions of Section 334.101 RSMo.

■ **HAROLD J. PEDERSEN, M.D.,** *Washington, Missouri*
Order dated 12/7/88. Revocation of Missouri license.
Violation: Section 334.103 RSMo. 1986.

■ **ROBERT D. BILDERBACK, M.D.,** *St. Louis, Missouri*
Order dated 12/7/88. Revocation of Missouri license.
Violation: Section 334.100.2 (5)(8)(24) RSMo. 1986

■ **LLOYD D. ARMOLD, D.O.,** *Phoenix, Arizona*
Order dated 12/21/88. Revocation of Missouri license.
Violation: Section 334.100.2 RSMo. 1986

■ **DAVID R. HERRERA, M.D,** *Carterville, Illinois*
Order dated 12/21/88. Revocation of Missouri license.
Violation: Section 334.100.2 (2)(3)(5)(11)(14) RSMo. 1986

■ **JACK J. WEBB, M.D.,** *Blytheville, Arkansas*
Order dated 12/21/88. Revocation of Missouri license.
Violation: Section 334.100.2 (6) RSMo. 1986

■ **ROBERT W. GEORGE, M.D.,** *Puxico, Missouri*
Order dated 12/21/88. Two years probation.
Violation: Section 334.100.2 (5)(8)(13) RSMo. 1986

■ **WILLIAM R. BONNER, D.O.,** *Liberty, Missouri*
Order dated 8/24/88. Ten years probation.
Violation: Section 334.100.2 (4) (o) RSMo.

■ **PHILLIP R. BRACKETT, D.O.,** *Memphis, Missouri*
Order dated 7/6/88. Letter of reprimand.
Violation: Section 334.100.2 (5)(6)(10)(13) RSMo. 1986; 4 CSR 150-5.010 and 4 CSR 150-5.020

■ **GEORGE W. TAYLOR, M.D.,** *Salt Lake City, Utah*
Order dated 11/3/88. Voluntary surrender.
Violation: Section 334.100.2 (1)(4h)(8)(13)(22)(23)(24) RSMo. Supp. 1987

■ **JEROME D. DIRKERS, M.D.,** *Salt Lake City, Utah*
Order dated 1/4/89. Voluntary surrender.
Violation: Section 334.100.2 (1)(8)(13)(22)(23)(24) RSMo.

■ **GEORGE GARY, M.D.,** *Marceline, Missouri*
Order dated 8/31/88. One year probation.
Violation: Section 334/100.2 RSMo.

Physician's Recognition Awards

Twenty-three MSMA members qualified for the MSMA-AMA Physician's Recognition Award during February 1989. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Boone

Charles L. Puckett, *Columbia*

Greene

Darrel D. Domann, *Springfield*
James A. Gessler, *Springfield*
Jeffrey R. Johnson, *Springfield*
Wayne B. Miles, *Springfield*
David E. Nelson, *Springfield*
Janie R. Vale, *Springfield*

Metro Med-Greater Kansas City

Robert A. Chandler, *Kansas City*
Edward P. Gutek, *Kansas City*
Rex M. Joyce, *Kansas City*
Donald H. Morrison, *Liberty*

SEMO

Michael F. Bell, *Sikeston*

St. Louis Metropolitan

Mauro J. Carranza, *St. Louis*
James W. Kessel, *St. Louis*
Alan M. Londe, *Chesterfield*
Timothy R. O'Connell, *St. Louis*
Moududur Rahman, *Clayton*
Abdollah A. Sabet, *Ballwin*
James H. Scheu, *St. Peters*
Raymond E. Shively, *St. Louis*
Edith S. Trugly, *St. Louis*
Paul H. Young, *St. Louis*
George H. Zografakis, *St. Louis*

Professional help for health professionals.

Substance abuse is a growing problem among health professionals. At Timberlawn Psychiatric Hospital, a special program exists to help health professionals overcome substance abuse problems.

A range of treatment options, individual and group therapy programs, and other recovery-oriented services are all geared toward the unique needs of the health professional. An individualized evaluation leads to selection of the most appropriate treatment program, which is further enhanced by specialized aftercare and monitoring services. Treatment team members include Board Certified psychiatrists, clinical psychologists, psychiatric social workers and substance abuse counselor specialists with certification in their field.

At Timberlawn, we understand the unique challenges faced by health professionals today, and we're here to help. For more details on our facility or referral arrangements, contact: Dr. Edgar P. Nace, Chief of Substance Abuse Services.

TIMBERLAWN
PSYCHIATRIC HOSPITAL
PROFESSIONALS HELPING PROFESSIONALS

4600 Samuell Blvd. • P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958 • 1-800-426-4944

Most patients need only one.

K-DUR™ 20 (potassium chloride) 20mEq
Microburst Release System™
Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System™
(potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3 The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS)**; other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3 Correction of acidosis, if present, with intravenous sodium bicarbonate
4 Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

I002004

13944326
Rev. 4/87

Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

Where do you go when you need to know more about your senior patients?

SENIOR PATIENT
Premier Issue

SENIOR PATIENT

We'll take good care of you.

Coming in the May/June issue:

- Why one nursing home and not another?
- Helping patients with hearing problems
- How hard should we try to get older patients to stop smoking?
- Caring for diabetic foot ulcers

Read Every Issue from Cover to Cover!

HELPING TO ACHIEVE THE FOUR GOALS[1] OF ANTIHYPERTENSIVE THERAPY...

MARION LABORATORIES
CARDIZEM SR
INTRODUCES

NEW

CARDIZEM® SR
(diltiazem HCl) sustained release capsules

For hypertension

Controls blood pressure[2-6]

Maintains well-being[2-6]

Helps prevent end-organ complications[7,8]

Helps reduce cardiovascular risks[2,5,9]

90 mg SR bid

0930A9

Please see brief summary of prescribing information on next page.

NEW

CARDIZEM® SR

(diltiazem HCl) sustained release capsules

For hypertension

CARDIZEM SR

EFFECTIVE MONOTHERAPY WITH HIGH PATIENT ACCEPTANCE

Starting Dosage:

Cardizem SR
90 mg

90 mg bid*

Also Available: 120-mg capsules

*Dosage must be adjusted to each patient's needs, starting with 60 to 120 mg twice daily.

BRIEF SUMMARY
CARDIZEM® SR
(diltiazem hydrochloride)
Sustained Release Capsules

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, (3) patients with hypotension (less than 90 mm Hg systolic), (4) patients who have demonstrated hypersensitivity to the drug, and (5) patients with acute myocardial infarction and pulmonary congestion documented by x-ray on admission.

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (nine of 2,111 patients or 0.43%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). An acute study of oral diltiazem in patients with impaired ventricular function (ejection fraction 24% ± 6%) showed improvement in indices of ventricular function without significant decrease in contractile function (dp/dt). Experience with the use of CARDIZEM (diltiazem hydrochloride) in combination with beta-blockers in patients with impaired ventricular function is limited Caution should be exercised when using this combination.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** Mild elevations of transaminases with and without concomitant elevation in alkaline phosphatase and bilirubin have been observed in clinical studies Such elevations were usually transient and frequently resolved even with continued diltiazem treatment. In rare instances, significant elevations in enzymes such as alkaline phosphatase, LDH, SGOT, SGPT, and other phenomena consistent with acute hepatic injury have been noted. These reactions tended to occur early after therapy initiation (1 to 8 weeks) and have been reversible upon discontinuation of drug therapy The relationship to CARDIZEM is uncertain in some cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing

Dermatological events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported Should a dermatologic reaction persist, the drug should be discontinued

Drug Interaction. Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction (See WARNINGS.) Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes biotransformation by cytochrome P-450 mixed function oxidase Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Dosages of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment, may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

Beta-blockers: Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated, but available data are not sufficient to predict the effects of concomitant treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted (See WARNINGS.)

Cimetidine: A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a 1-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day Ranitidine produced smaller, nonsignificant increases The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine An adjustment in the diltiazem dose may be warranted

Digitalis: Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20% Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization (See WARNINGS.)

Anesthetics: The depression of cardiac contractility, conductivity, and automaticity as well as the vascular dilation associated with anesthetics may be potentiated by calcium channel blockers When used concomitantly, anesthetics and calcium blockers should be titrated carefully

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity There was also no mutagenic response in in vitro bacterial tests No intrinsic effect on fertility was observed in rats

Pregnancy. Category C Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality These doses, in some studies, have been reported to cause skeletal abnormalities In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates There was an increased incidence of stillbirths at doses of 20 times the human dose or greater

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers. Diltiazem is excreted in human milk One report suggests that concentrations in breast milk may approximate serum levels If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted

Pediatric Use. Safety and effectiveness in children have not been established

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded from these studies

The adverse events described below represent events observed in clinical studies of hypertensive patients receiving either CARDIZEM Tablets or CARDIZEM SR Capsules as well as experiences observed in studies of angina and during marketing The most common events in hypertension studies are shown in a table with rates in placebo patients shown for comparison. Less common events are listed by body system, these include any adverse reactions seen in angina studies that were not observed in hypertension studies In all hypertensive patients studied (over 900), the most common adverse events were edema (9%), headache (8%), dizziness (6%), asthenia (5%), sinus bradycardia (3%), flushing (3%), and 1° AV block (3%). Only edema and perhaps bradycardia and dizziness were dose related The most common events observed in clinical studies (over 2,100 patients) of angina patients and hypertensive patients receiving CARDIZEM Tablets or CARDIZEM SR Capsules were (ie, greater than 1%) edema (5.4%), headache (4.5%), dizziness (3.4%), asthenia (2.8%), first-degree AV block (1.8%), flushing (1.7%), nausea (1.6%), bradycardia (1.5%), and rash (1.5%).

DOUBLE BLIND PLACEBO CONTROLLED HYPERTENSION TRIALS

Adverse	Diltiazem N=315 # pts (%)	Placebo N=211 # pts (%)
headache	38 (12%)	17 (8%)
AV block first degree	24 (7.6%)	4 (1.9%)
dizziness	22 (7%)	6 (2.8%)
edema	19 (6%)	2 (0.9%)
bradycardia	19 (6%)	3 (1.4%)
ECG abnormality	13 (4.1%)	3 (1.4%)
asthenia	10 (3.2%)	1 (0.5%)
constipation	5 (1.6%)	2 (0.9%)
dyspepsia	4 (1.3%)	1 (0.5%)
nausea	4 (1.3%)	2 (0.9%)
palpitations	4 (1.3%)	2 (0.9%)
polyuria	4 (1.3%)	2 (0.9%)
somnolence	4 (1.3%)	—
alk phos increase	3 (1%)	1 (0.5%)
hypotension	3 (1%)	1 (0.5%)
insomnia	3 (1%)	1 (0.5%)
rash	3 (1%)	1 (0.5%)
AV block second degree	2 (0.6%)	—

In addition, the following events were reported infrequently (less than 1%) or have been observed in angina trials. In many cases, the relation to drug is uncertain.

Cardiovascular:	Angina, arrhythmia, bundle branch block, tachycardia, ventricular extrasystoles, congestive heart failure, syncope
Nervous System:	Amnesia, depression, gait abnormality, hallucinations, nervousness, paresthesia, personality change, tinnitus, tremor, abnormal dreams
Gastrointestinal:	Anorexia, diarrhea, dysgeusia, mild elevations of SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase, thirst
Dermatological:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, CPK increase, dyspnea, epistaxis, eye irritation, hyperglycemia, sexual difficulties, nasal congestion, nocturia, osteoarticular pain, impotence, dry mouth.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM alopecia, gingival hyperplasia, erythema multiforme, and leukopenia Definitive cause and effect relationship between these events and CARDIZEM therapy cannot yet be established

Issued 1/89

References: 1. Staessen J, Fagard R, Lignen P, et al: *Pract Cardiol* 1986;12(5):55-65. **2.** Massie B, MacCarthy EP, Ramanathan KB, et al: *Ann Intern Med* 1987;107(2):150-157. **3.** Weir MR, Josselson J, Giard MJ, et al: *Am J Cardiol* 1987;60:361-411. **4.** Frishman WH, Zawada ET Jr, Smith LK, et al: *Am J Cardiol* 1987;59:615-623. **5.** Pool PE, Seagren SC, Salel AF: *Am J Cardiol* 1985;56:86H-91H. **6.** Pool PE, Seagren SC, Salel AF: *Cardiol Board Rev* 1986;3(10):77-91. **7.** Sunderrajan S, Reams G, Bauer JH: *Hypertension* 1986;8:238-242. **8.** Amodeo C, Kobrin I, Ventura HO, et al: *Circulation* 1986;73(1):108-113. **9.** Schulte K-L, Meyer-Sabellek WA, Haertenberger A, et al: *Hypertension* 1986;8:859-865.

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

CSRAD706
0930A9

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

April

3 **Internal Medicine Review: Oncology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

6-7 **16th Annual Obstetrics & Gynecology Symposium** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

10 **Internal Medicine Review: Hematology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

12 **Current Trends in Diabetes** — Location: St. Luke's Hospital Institute for Health Education. Contact: Patty Fogerty, St. Luke's Hospital Institute for Health Education, 222 South Woods Mill Road, Suite 350 North, St. Louis, MO 63017. 314/851-6006.

13 **Issues Facing the Diffusion of Medical Technology** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

14-15 **Midwest Conference on Eating Disorders** — Location: Hilton Plaza Inn, Kansas City. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110. 314/362-7130.

17 **Internal Medicine Review: Nephrology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 **Internal Medicine Review: Cardiology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

27 **Tuberculosis Update & Plans for Elimination in Missouri by 2010** — Location: St. Louis Metropolitan Medical Society Building, 3839 Lindell, St. Louis, MO. Contact: Tereasa D. Parks-Thomas, American Lung Association of Eastern Missouri, 1118 Hampton Ave., St. Louis, MO 63139-3196. 314/645-5505.

27-28 **Critical Care Update** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

1 **Internal Medicine Review: Gastroenterology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

1-13 or 15-26 **Institute on Clinical Health Care Ethics in Catholic Health Care Facilities** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: SLU Center for Health Care Ethics, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8195. **Note:** You may select either session to attend.

4-6 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Engel, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

4-7 **Psychiatry Legal Environment: Medicine's Response** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Internal Medicine Review: Pulmonary** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

11-17 **Medical Malpractice: Law Theory and Practice for Attorneys, Physicians and Risk Managers** — Location: Colonial Williamsburg, VA. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

12-13 **2nd Annual Advanced Contact Lens Update** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

13 **One-Day Anesthesia Symposium** — Location: Paul F. Detrick Auditorium, Christian Hospital Northeast. Contact: C. Gerald Giles, CRNA, B.S., Christian Hospital Northeast, 11133 Dunn Road, St. Louis, MO 63136. 314/355-2300, ext. 5022.

15 **Internal Medicine Review: Rheumatology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

17-18 **Current Management in Critical Care** — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda F. Smutz, Kansas City Southwest Clinical Society, 7920 Ward Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

22 **Internal Medicine Review: Infectious Diseases** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis, MO. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 **Care of the Patient with Multiple Trauma** — Location: Embassy Suites Hotel, St. Louis, MO. Contact: Nancy Toy, R.N., 5-SICU, 3635 Vista at Grand, P.O. Box 15250, St. Louis, MO 63110-0250. 314/577-8665.

31-June 3 **The Aging Ear** — Location: The Omni International Hotel, St. Louis, MO. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

June

9-10 **Frontiers in Endoscopy: Flexible Endoscopy of the Urinary Tract** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

9-10 **Thorny Medical-Legal Issues** — Location: Westin Hotel, Portland, OR. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

23-25 **Missouri Chapter of the American College of Surgeons Annual Meeting** — Location: Lodge of the Four Seasons, Lake Ozark, MO. Contact: Linda Wheelen, 1926 S. Broadway, Springfield, MO 65807. 417/869-5222.

July

14-15 **Cancer Management Course** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

28-29 **Advanced Trauma Life Support Provider Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8372.

September

29-30 **Advanced Trauma Life Support Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8372.

October

6-8 **Ozark Chest Conference: Lung & Heart/Lung Transplantation** — Location: Tan-Tar-A, Lake Ozark, MO. Contact: American Lung Association of Eastern Missouri, 1118 Hampton Avenue, St. Louis, MO 63139-3196 314/645-5505.

ST. LOUIS
Children's
HOSPITAL
AT WASHINGTON UNIVERSITY MEDICAL CENTER

CME
CONTINUING
MEDICAL
EDUCATION

PROGRESS IN CLINICAL PEDIATRICS V

MAY 12–13, 1989
at ST. LOUIS CHILDREN'S HOSPITAL

PREVENTIVE MEASURES IN PEDIATRIC CARDIOLOGY

- Cholesterol in Children
- Pediatric Hypertension
- New Diagnostic Tools
- Sudden Death/Athletes

CLINICAL GENETICS INTO THE 1990s

- Dysmorphology Examination
- Genetic Counseling
- Mapping the Human Genome
- Indications for Chromosome Studies

THE FUTURE OF VACCINES & IMMUNIZATIONS

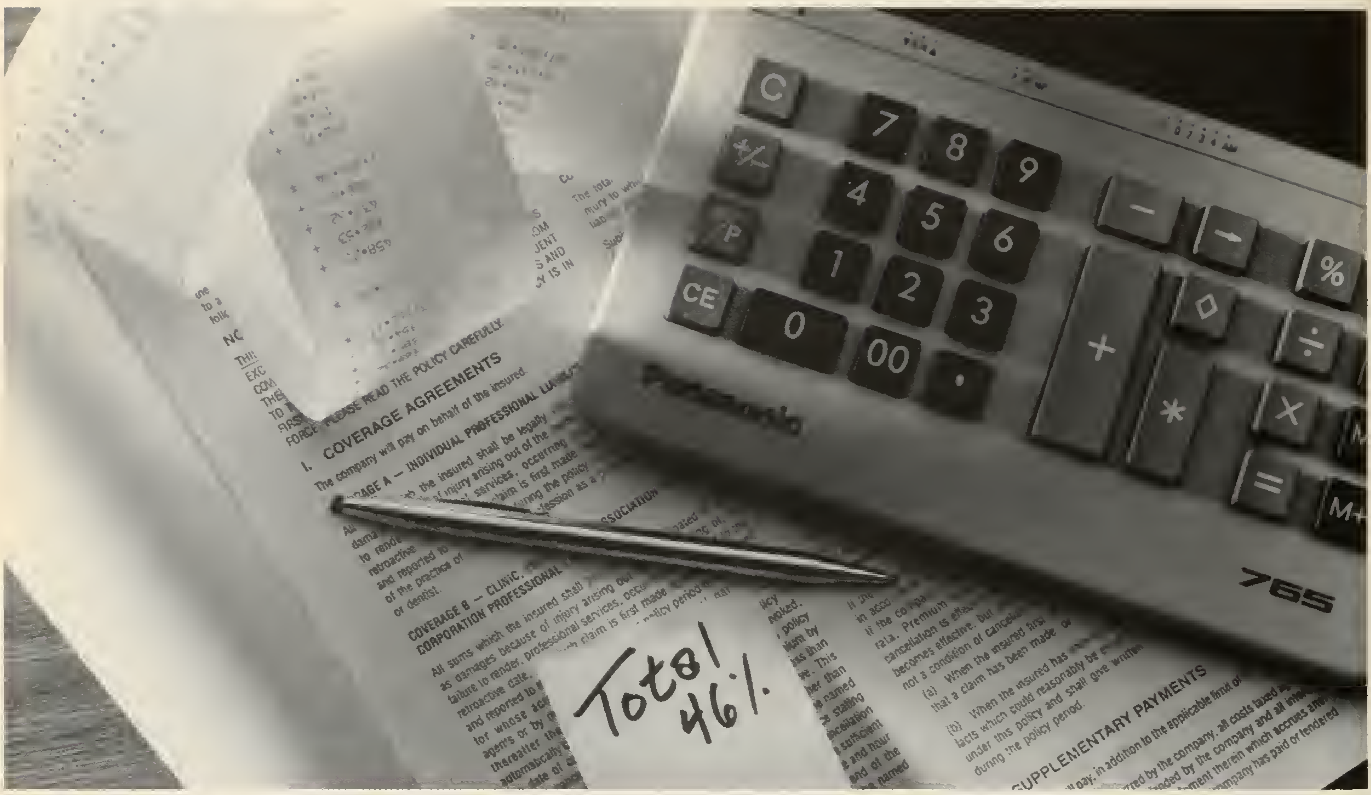
- Old Vaccines, New Questions
- New Viral Vaccines

Application for CME accreditation has been submitted. Washington University is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education programs for physicians.
TUITION: $200

FOR MORE INFORMATION CALL:

St. Louis Children's Hospital
Margo Long, CME Services
314-454-6196

Doctor's Line
1-800-678-HELP



Introducing Claims Paid Coverage From Risk Control Associates

Save Up to 46% on Your Premiums with Guaranteed Rates for 3 Years!

Cut Your Liability Insurance Costs Up to 46% With Our NEW Claims Paid Coverage. If you are tired of the high cost of Medical Liability Insurance, now there is something you can do about it. It's called **Claims Paid** coverage, and it can cut your premium costs up to 46%. **And we guarantee a level premium for 3 years if you join now!**

Claims Paid is a bold new concept in medical liability coverage. It offers the benefits of full protection at a fraction of the cost. Risk Control Associates is the only company to offer this innovative plan to the physicians and dentists of Missouri.

Our New Claims Paid Policy is Designed for Maximum Protection at a Much Lower Premium. Risk Control Associates can offer reduced premiums for **Claims Paid** policies because premiums are based on money actually paid out. And **Claims Paid** Insurance is available in the same coverage options as Occurrence and Claims Made policies. If you are currently insured under one of our other policies, you can easily convert your coverage to **Claims Paid.**

Risk Control Associates is a Leader in Innovation and Services. Risk Control Associates is Missouri's leader in the Medical Liability Insurance field. We are owned and managed by physicians, so we know what is important to you. We understand your need for maximum protection and excellent service. And we deliver both. We are "Physicians Helping Physicians."

For more information about our new **Claims Paid** Policy, call for our free brochure, "Understanding Claims Paid Medical Liability Insurance" or ask to speak with a company representative. Our phone number is (800) 422-5122. We will be glad to answer any questions you may have.

You can start saving up to 46% on your insurance premiums right away, **so contact us today.** It will mean significant savings to you and an excellent investment in your future.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS

Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

1111 S. Glenstone • Suite 3-102
Springfield, Missouri 65804
(800) 422-5122 • (417) 862-0650

In Memoriam

■ **Curtis U. Franklin Jr., M.D.**, died February 17, 1989 at the age of 59. Dr. Franklin, a psychiatrist, had practiced medicine in Kansas City since 1967. He practiced internal medicine there from 1960 to 1964. He was an assistant clinical professor at the University of Kansas Medical School and a lecturer at the University of Missouri-Kansas City School of Medicine. He obtained his medical degree at Howard University Medical School in 1953. He was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Eugene V. Henschel, M.D.**, died February 21, 1989 at the age of 77. Dr. Henschel, an internist, practiced medicine in St. Louis for almost 40 years before retiring in 1984. A long-time staff member at Lutheran Medical Center, he was also a captain in the Army Medical Corps. He obtained his medical degree at St. Louis University School of Medicine in 1945. Dr. Henschel was a member of the St. Louis Metropolitan Medical Society.

■ **Herbert C. McMurray, M.D.**, died February 21, 1989 at the age of 77. Dr. McMurray, a family practitioner, practiced medicine in Wentzville from 1936 to 1956, then moved his practice to Manchester. He retired in 1978. He obtained his medical degree at St. Louis University School of Medicine in 1936. Dr. McMurray was a member of the St. Louis Metropolitan Medical Society.

■ **Albert H. Muench, M.D.**, died January 18, 1989 at the age of 85. Dr. Muench, a general practitioner, practiced medicine in St. Joseph for 44 years before retiring in 1974. He was a former staff member of the Methodist Medical Center and an associate staff member of the St. Joseph Hospital. He obtained his medical degree at the University of Pennsylvania Medical School in 1928. Dr. Muench was a member of the Buchanan County Medical Society.

■ **Joseph A. Roy, M.D.**, died February 7, 1989 at the age of 66. Dr. Roy, a general surgeon, practiced medicine in St. Louis for many years. He obtained his medical degree at the St. Louis University School of Medicine in 1947. Dr. Roy was a member of the St. Louis Metropolitan Medical Society.

■ **Arthur T. Tuma, M.D.**, died January 21, 1989 at the age of 75. Dr. Tuma, a radiologist, practiced medicine in Poplar Bluff for many years before retiring in 1986. He served as a professor at the University of Nebraska College of Medicine and the University of Mississippi College of Medicine. He obtained his medical degree at the Creighton University School of Medicine in 1957. Dr. Tuma was a member of the Butler-Wayne-Ripley-Carter Counties Medical Society.

■ **Ed S. Wallace, M.D.**, died December 26, 1988 at the age of 75. Dr. Wallace, an otolaryngologist, practiced medicine in Mexico for more than 30 years. He was a past president of the East Central Missouri Mental Health Association and of the Audrain County Mental Health Association. He was a veteran of World War II, during which he was in the Army Medical Service as chief of medical service for the General Hospital in Manila, Philippines, from 1944-1946. He obtained his medical degree at the University of Tennessee in 1943. Dr. Wallace was a member of the Audrain County Medical Society.

YOCON®

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

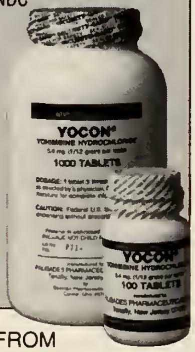
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

**PALISADES
PHARMACEUTICALS, INC.**
219 County Road
Tenafly, New Jersey 0767C
**(201) 569-8502
1-800-237-9083**

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

- -

For more information, return this form or contact:

**Wes Woodbury & Associates
3609 NE 62nd Terrace
Kansas City, MO 64119
816-455-3400**

Amount of insurance $ ____________________

Date of Birth ____________________

Smoker/Non-Smoker (circle one)

Name ____________________

Address ____________________

City/State ____________________

Zip ______________ Phone ______________

New Members

■ **Daniel J. Bergmann, M.D.,** #6 Jungermann Circle, Suite 102, St. Peters 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Bergmann received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1980. He completed his residency at Truman Medical Center, Kansas City, MO. Dr. Bergmann specializes in general surgery.

■ **Palmer Q. Bessey, M.D.,** Box 8109, 4960 Audubon Ave., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Bessey obtained his medical degree at the University of Vermont in 1975. He completed his residency at the University of Alabama Hospital, Birmingham, AL. Dr. Bessey specializes in surgery.

■ **Edward M. Campbell, M.D.,** 1325 Grand, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Campbell obtained his medical degree at the Louisiana State University School of Medicine in 1984. He completed his residency at Tulane Medical Center, New Orleans, LA. Dr. Campbell specializes in plastic surgery.

■ **William S. Campbell, Jr., M.D.,** 36 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Campbell received his preliminary education at the University of Arkansas and obtained his medical degree at the University of Arkansas in 1982. He completed his residency at Cook County Hospital, Chicago, IL. Dr. Campbell specializes in radiology.

■ **Matthew J. Coleman, M.D.,** 21 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Coleman received his preliminary education at Lamar University and obtained his medical degree at Baylor College of Medicine in 1982. He completed his residency at the University of Arkansas University Hospital, Little Rock, AR. Dr. Coleman specializes in gastroenterology.

■ **Jon D. Cooksey, M.D.,** 950 Francis Place, Clayton 63105, has become a member of the St. Louis Metropolitan Medical Society. Dr. Cooksey received his preliminary education at the University of Kentucky and obtained his medical degree at Tulane University in 1962. He completed his residency at Charity Hospital, New Orleans, LA. Dr. Cooksey specializes in cardiology.

■ **Robert L. Herman, M.D.,** Rockhill Cardiology Group, 6650 Troost, Suite 106, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Herman received his preliminary education at the State University of New York and obtained his medical degree at Jefferson Medical College in 1979. He completed his residency at the USAF Medical Center, Wright Patterson AFB, OH. Dr. Herman specializes in cardiology.

■ **Raymond J. Hu, M.D.,** #6 Jungermann Circle, St. Peters 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Hu received his preliminary education at St. Louis University and obtained his medical degree at the University of Missouri-Columbia in 1982. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Hu specializes in internal medicine.

■ **Rita M. Hyde, M.D.,** 1500 N.E. Parvin Road, Kansas City 64116, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hyde received her preliminary education at Pittsburg State University and obtained her medical degree at the University of Kansas in 1985. She completed her residency at St. Luke's Hospital, Kansas City, MO. Dr. Hyde specializes in internal medicine.

■ **Stephen P. Jarvis, M.D.,** 1802 Union St. Square, St. Joseph 64501, has become a member of the Buchanan County Medical Society. Dr. Jarvis received his preliminary education at Southeast Missouri State University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1984. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Jarvis specializes in psychiatry.

■ **Vijaya Kanmanthreddy, M.D.,** 1009 W. St. Maartens Drive, Suite A, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Kanmanthreddy received his preliminary education at New Science College, India and obtained his medical degree at Osmania University, India in 1978. He completed his residency at the Greater Kansas City Mental Health Foundation, Kansas City, MO. Dr. Kanmanthreddy specializes in psychiatry.

■ **John V. King, Jr., M.D.,** 645 S. New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. King received his preliminary education at St. Louis University and obtained his medical degree at the St. Louis University School of Medicine in 1968. He completed his residency at St. John's Mercy Hospital, St. Louis, MO. Dr. King specializes in internal medicine.

■ **Wilfred Lee, M.D.,** 21 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Lee received his preliminary education at Columbia University and obtained his medical degree at the University of Pennsylvania in 1980. He completed his residency at Graduate Hospital, Philadelphia, PA. Dr. Lee specializes in gastroenterology.

■ **Robert B. Lehman, M.D.,** 3009 N. Ballas Road, Suite 100, St. Louis 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Lehman obtained his medical degree at Texas Tech University in 1982. He completed his residency at Lubbock General Hospital, Lubbock, TX. Dr. Lehman

The Dodson Dividend Plan

A program for workers' compensation insurance that gives you the opportunity to earn a dividend at the end of your policy year, depending on claim experience.

Our Plan has been approved by the Missouri State Medical Association since 1983.

Insured MSMA members have received dividends as high as **35%**. Returns of premium now average **16.22%** per year.

With returns like these, shouldn't you insure with Dodson, too?

1-800-825-3760
Ext. 2990

underwritten by
Casualty Reciprocal
Exchange, member

DODSON GROUP
9201 State Line Road
Kansas City, MO 64114

Why does JACKSON & COKER *recruit more physicians each year than any other company?*

- ☐ Largest pool of available physicians in the nation
- ☐ Network of 7 regional offices nationwide
- ☐ Expertise that produces unparalleled results in recruiting quality physicians
- ☐ Proven system that produced over 1,000 placements in the last 3 years.

JACKSON AND COKER

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

specializes in internal medicine.

■ **Michael E. McCadden, M.D.**, 621 South New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. McCadden obtained his medical degree at Vanderbilt University in 1982. He completed his residency at Vanderbilt University, Nashville, TN. Dr. McCadden specializes in dermatology.

■ **David J. Morton, M.D.**, 6400 Clayton Road, Suite 212, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Morton obtained his medical degree at the University of Missouri-Columbia in 1981. He completed his residency at Wake Forest University, Winston Salem, NC. Dr. Morton specializes in internal medicine.

■ **Keith E. Pack, M.D.**, One Barnes Hospital Plaza, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Pack obtained his medical degree at the University of Kansas in 1986. He is completing his residency at Barnes Hospital, St. Louis, MO. Dr. Pack specializes in psychiatry.

■ **Lilly A. Palmer, M.D.**, 510 S. Kingshighway, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Palmer received her preliminary education at the University of Denver and obtained her medical degree at the Washington University School of Medicine in 1960. She completed her residency at Washington University, St. Louis, MO. Dr. Palmer specializes in radiology.

■ **Yves R. Prophete, M.D.**, 7601 Natural Bridge, St. Louis 63121, has become a member of the St. Louis Metropolitan Medical Society. Dr. Prophete obtained his medical degree at the St. Louis University School of Medicine in 1976. He completed his residency at St. Louis University Medical Center, St. Louis, MO. Dr. Prophete specializes in urology.

■ **Jacob P. Pyeatte, Jr., M.D.**, 55 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Pyeatte received his preliminary education at the University of Arkansas and obtained his medical degree at the University of Arkansas for Medical Sciences in 1981. He completed his residency at Sacred Heart Hospital, Pensacola, FL. Dr. Pyeatte specializes in obstetrics/gynecology.

■ **Syed A. Raza, M.D.**, 6401 West Main St., Villa di Notre Dame Medical Bldg., Suite 6, Belleville, IL 62223, has become a member of the St. Louis Metropolitan Medical Society. Dr. Raza received his preliminary education at Osmania University, India and obtained his medical degree at Dow Medical College, Pakistan in 1959. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Raza specializes in child and adult psychiatry.

■ **Jerold L. Saef, M.D.**, 510 S. Kingshighway Blvd., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Saef obtained his medical degree at the University of South Florida in 1981. He completed his residency at St. Elizabeth's Hospital, Boston, MA. Dr. Saef specializes in cardiology/internal medicine.

■ **C. Craig Satterlee, M.D.**, 500 Penn Plaza Medical Center, 2929 Baltimore, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Satterlee received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri School of Medicine in 1982. He completed his residency at the University of Missouri Health Sciences Center, Columbia, MO. Dr. Satterlee specializes in orthopaedic surgery.

■ **Earl W. Shelton, M.D.**, 800 University Place, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Shelton received his preliminary education at Tennessee A & I State University and obtained his medical degree at Meharry Medical College in 1959. He completed his residency at Homer G. Phillips Hospital, St. Louis, MO. Dr. Shelton specializes in internal medicine.

■ **Rand W. Sommer, M.D.**, 1034 South Brentwood Blvd., St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Sommer received his preliminary education at Davidson College and obtained his medical degree at the Washington University School of Medicine in 1980. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Sommer specializes in internal medicine.

■ **Julia C. Stevens, M.D.**, 660 S. Euclid, Box 8096, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Stevens obtained her medical degree at Duke University in 1983. She completed her residency at Washington University, St. Louis, MO. Dr. Stevens specializes in ophthalmology.

■ **Rebecca L. Tominack, M.D.**, Monsanto, 800 N. Lindbergh A3NB, St. Louis 63167, has become a member of the St. Louis Metropolitan Medical Society. Dr. Tominack obtained her medical degree at the University of Maryland in 1981. She completed her residency at the University of Maryland Hospital, Baltimore, MD. Dr. Tominack specializes in internal medicine.

■ **Mark L. Vandewalker, M.D.**, Allergy Clinic, GCWACH, Ft. Leonard Wood 65473, has become a member of the Mid-Missouri County Medical Society. Dr. Vandewalker received his preliminary education at Washington University and obtained his medical degree at the St. Louis University School of Medicine in 1978. He completed his residency at Fitzsimmons AMC, Aurora, CO. Dr. Vandewalker specializes in allergy.

■ **Nancy Weber-Bornstein, M.D.**, 1701 Lacey St., Southeast Missouri Hospital, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Weber-Bornstein received her preliminary education at the University of Michigan and obtained her medical degree at the University of Michigan School of Medicine in 1982. She completed her residency at the University of Michigan, Ann Arbor, MI. Dr. Weber-Bornstein specializes in internal medicine.

■ **Richard B. Whiting, M.D.**, 6400 Clayton, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Whiting obtained his medical degree at the St. Louis University School of Medicine in 1965. He completed his residency at Peter Bent Brigham Hospital, Harvard University Medical School, Boston, MA. Dr. Whiting specializes in internal medicine.

■ **John H. Winter, M.D.**, 734 Missouri Theatre Bldg., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Winter received his preliminary education at St. Louis University and obtained his medical degree at the St. Louis University School of Medicine in 1957. He completed his residency at St. John's Hospital, St. Louis, MO. Dr. Winter specializes in internal medicine.

■ STUDENT MEMBERS

St. Louis University

Francis A. Dysarz III

Editor's Desk

continued from page 203

effectiveness of care are crucial. The issue of quality of care and rationing demand answers to questions that are difficult if not impossible to answer. The question that will be asked is "how effective is medical care?" For instance, it appears that prenatal care is very effective. It is not so clear how effective some forms of cancer treatment are.

There will be increasing pressure to ration medical care. This will occur as part of a political process in the future. What is our job in this process? Our job is to begin to seriously address the issue of the effectiveness or quality of medical care. This is especially important for newer forms of treatment since it is in these domains that there will be increasing pressure for rationing. Another difficulty that newer treatments will face is that they may be required for budget considerations to replace a previous standard treatment. It is here that rigorous scientific studies of the effectiveness of care would be valuable. When we do this then we can participate powerfully in the questions of what domains of medical care should be supported and which could be realistically be rationed. ■

*Welch HG, Larson EB: Dealing with Limited Resources, *NEJM* 319:171-173, 1988.

AIM HIGH

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.

We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.

Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

CAPT. EARL THOMPSON
314-434-9555
STATION TO STATION COLLECT

AIR FORCE

Playing Cat & Mouse?

Just another game, right? But as a health care professional, you don't have time to play such games, especially where your **medical liability insurance** is concerned.

Your last insurance company caught you with surprisingly low premiums, then gave you renewal rates that sent you running. And remember that other company that simply vanished into thin air on renewal? You were left to play "hide 'n' seek." And you lost.

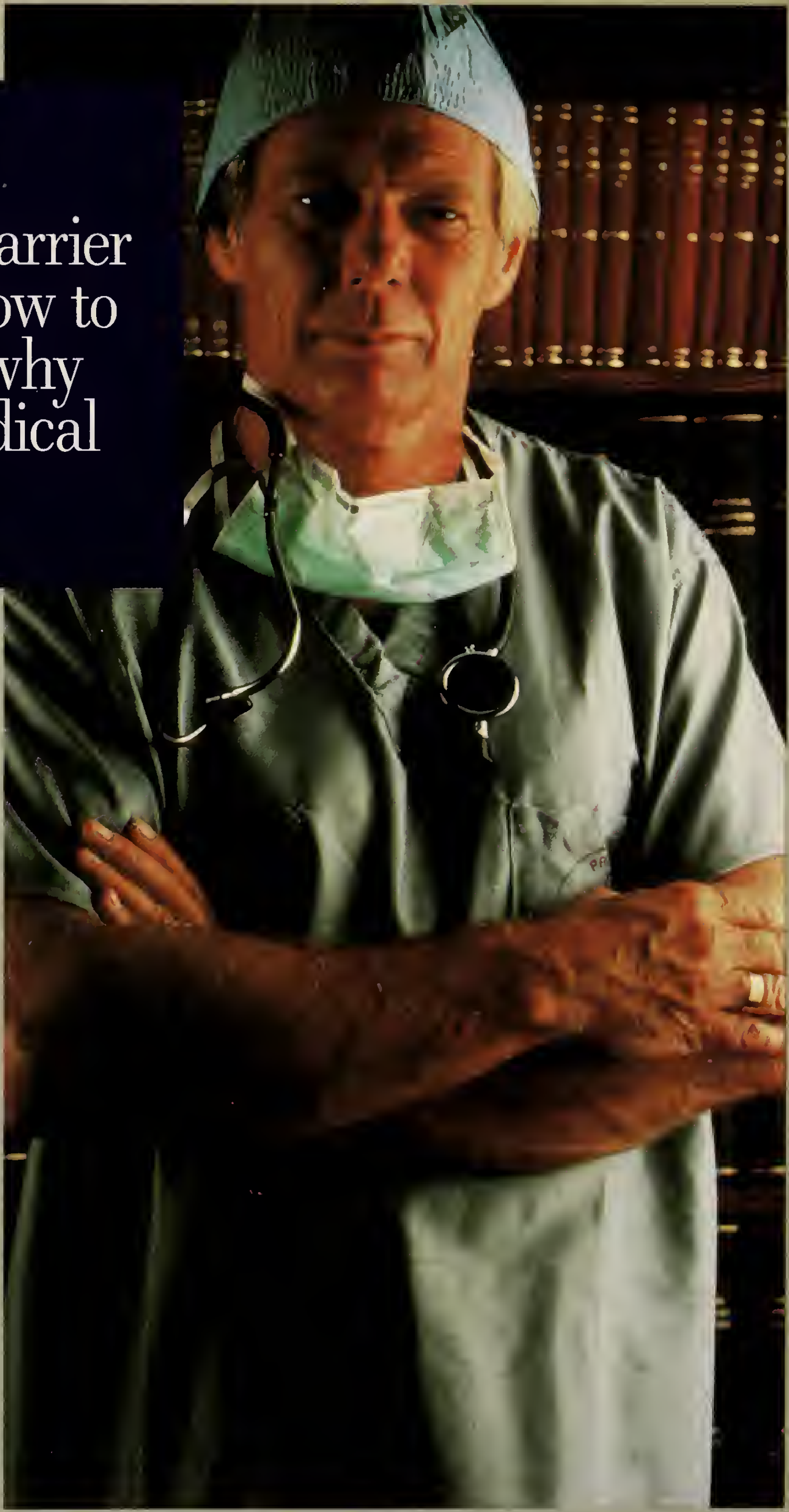
Stop playing someone else's game, and talk with us at Medical Defense Associates. **MDA is a not-for-profit medical liability insurance company** that was formed by doctors to serve only doctors.

For more than 12 years, MDA has offered consistently competitive medical liability rates and superior career protection. We have an excellent reputation for protecting YOUR reputation with aggressive defense of unmerited claims. That's why **MDA insures more of Missouri's doctors than any other medical liability insurance company.**

Don't pussyfoot around. Catch the winner ...because we don't play games.

Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120



"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."

At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E. Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400

Medical School News

The University of Missouri-Columbia

■ **Karen L. Bennett, Ph.D.**, assistant professor of microbiology, has been awarded four research grants on three projects. A Rockefeller Foundation grant and a March of Dimes Basil O'Conner Starter Grant will fund "Molecular Approaches to Germ Line Determination in *Ascaris lumbricoides*." Dr. Bennett also is working on "Germ Line-specific Gene Expression in Early Nematode Development" with funding from the Council for Tobacco Research. The MU-Weldon Springs Fund supports her project "Germ Line Determination in Early Nematode Development."

■ **Theresa Boley, R.N., B.S.N.**, surgery research associate, in January was awarded the Ethicon Laureate Award for best presentation at the Southeastern Surgical Congress and Nurses Association meeting in Tarpon Springs, Fla. Her presentation was on autologous blood in cardiac surgery.

■ **Frank B. Engley Jr., Ph.D.** professor of microbiology, in November presented talks on sterilization and disinfection at the International Conference on Infectious Diseases in Morelia, Mexico.

■ **Mehdi Farhangi, M.D.**, associate professor of hematology/oncology has had an article, "The Clinical Implications of Monoclonal Immunoglobulins," selected to be part of a continuing education program offered through the University of Connecticut. The article, which appeared in **Seminars in Oncology** in 1986, will be included as a suggested reading in the course titled "Grand Rounds Immunology Lecture Series: IGIV in CLL and Multiple Myeloma." SCP Communications Inc., in New York City is the Publisher.

■ **Thomas L. Feldbush, Ph.D.**, professor of microbiology, has been awarded a Veterans Administration Merit Review of $319,800 through 1992 for "Late Events in B-Cell Responses: Expression of Alkaline Phosphatase."

■ **John Gay, M.D.**, assistant professor of obstetrics and gynecology, has been awarded a grant from the Northern Missouri Chapter of the March of Dimes birth defects foundation to support the Transport-Accessibility Service program in 1989. This program is designed to improve the accessibility of prenatal care for pregnant adolescents.

■ **Mark A. McIntosh, Ph.D.**, associate professor of microbiology, has been awarded a National Science Foundation grant to study "Iron-mediated Regulation of Gene Expression."

■ **Michael C. Perry, M.D., FACP**, professor and chairman of medicine, participated in the Cancer Control Plan Release, the formal unveiling Feb. 15 in Jefferson City of a legislative initiative to save lives and reduce suffering from cancer in Missouri. Dr. Perry is chairman of the Missouri Cancer Control Advisory Board, which developed the initiatives that will come before the General Assembly this season. They include a tax on smokeless tobacco, mandatory insurance coverage for routine mammographies and a clean indoor air bill.

■ **Hugh E. Stephenson, Jr. M.D.**, former interim dean for the School of Medicine, has been appointed associate dean for clinical development. In selecting Dr. Stephenson for the position, **Dean Lester Bryant, M.D.**, cited the surgeon's longtime association with the school and his insight and skills in clinical medicine. Stephenson was the school's first clinical faculty member.

Dr. Stephenson will support and develop the school's association with the state's practicing physicians, assist in private fundraising efforts and contribute to program planning. He also will resume his position as chief of staff of University Hospital and Clinics.

Dr. Stephenson, appointed interim dean in December 1987, led the school during a year-long dean search.

■ **Zbylut T. Twardowski, M.D.**, and **Karl D. Nolph, M.D.**, professors of nephrology, have been issued a patent by the Canadian Patent Office for their invention titled "Dialysis Solutions Containing Cross-Linked Gelatin."

■ Two members of the division of immunology within the department of medicine recently have received funding from the Veterans Administration. **Sara E. Walker, M.D.**, professor of medicine and chief of the rheumatology section of Truman Veterans Hospital, received a VA Merit Review of $64,413 per year through September 1991 for "Regulation of Responses to TD Antigens in Autoimmune PN Mice." **Robert W. Hoffman, D.O.**, assistant professor of medicine, received a VA Career Development Award totaling $338,961 through 1992, for "Immunogenetics of Mixed Connective Tissue Disease." Dr. Hoffman also received a VA Merit Review totaling $162,133 over three years for the same project.

■ The School of Health Related Professions, part of the School of Medicine, has opened an adult day healthcare center called the Eldercare Center. Dedicated Feb. 15, the center provides health and social services in a protective setting for frail or impaired adults who cannot be left alone, yet can and want to live in their own homes.

The staff includes a gerontological clinical nurse specialist and experts in communicative disorders and physical and occupational therapies. A fee of $29 per day provides for individualized activities, access to rehabilitation services and a noon meal, among other services.

"The Eldercare Center offers a cost-saving alternative to nursing homes or home health care, says Director **Lois**

Long, assistant professor in the School of Health Related Professions.

"The Eldercare Center can help people who can benefit from rehabilitation while recovering from a stroke, as well as isolated elderly who need socialization and stimulation. The center also can benefit patients' families, Long says, by providing relief for those caring for a person with Alzheimer's disease or other dementias.

The center also will provide a new gerontological focus for the faculty and students of the School of Health Related Professions. This will strengthen research and teaching efforts, Long says.

For more information, call Lois Long at 314/882-7070 or write to the Eldercare Center, 200 Clark Hall, University of Missouri-Columbia, Columbia, MO 65211.

■ A Magnetic Resonance Imaging system with spectroscopy research capabilities is planned for University Hospital and Clinics. The university-funded $3.2 million project, to be completed in September, includes a Siemens Helicon 2.0 Telsa magnet and a building to house the instrument. More than 1,700 procedures are expected to be performed each year.

The addition of the MRI scanner enhances research, teaching and patient care, says **Robert Churchill, M.D.**, professor and chairman of radiology.

The move to an in-house MRI scanner will allow on-site training of residents, improve scheduling and monitoring of patient exams, and facilitate medical spectroscopy research.

MRI procedures are now performed at other Columbia hospitals.

University of Missouri-Kansas City

■ Officials currently are working out the details of an arrangement that will make St. Luke's Hospital of Kansas City a primary teaching hospital for UMKC. A final agreement should be signed July 1. St. Luke's, which is Kansas City's largest medical center, joins Truman Medical Center-West and -East, Children's Mercy Hospital and Western Missouri Mental Health Center as major affiliated hospitals.

Under the affiliation agreement, St. Luke's will transfer at least $3 million annually to UMKC for medical-education purposes. Funds will go toward enhancing the academic framework for St. Luke's residency programs, hiring more faculty members, creating more opportunity for current faculty members to do research, and improving training facilities. In addition, an assistant dean position will be created to oversee the implementation of all the school's education programs at St. Luke's. St. Luke's faculty members will have full representation on all of the school's councils, and the hospital will share equal responsibility for undergraduate, postgraduate, and continuing-education activities.

The affiliation will also add greater depth and breadth to the residency programs offered by TMC and St. Luke's, which are the city's two largest postgraduate training institutions. Each institution offers some residency programs which the other doesn't. St. Luke's currently has 84 residents in six residency programs, and TMC has 146 residents in 10 programs.

■ Truman Medical Center, primary teaching hospital for UMKC School of Medicine, received a much-needed financial shot in the arm February 7 when Kansas City voters approved a health levy that will bring $2 million annually to the hospital. "Our victory of February 7 will begin to rebuild the hospital's foundation for financial stability," said Executive Director **James J. Mongan, M.D.**, who is also Dean of the School of Medicine. "It will enable us to effectively manage the heavy demands and expectations placed on us by the community."

■ **Marjorie Sirridge, M.D.**, professor of Medicine and assistant dean for Curriculum, became the president of the Metropolitan Medical Society of Greater Kansas City, an organization that represents about 1,500 doctors. She is the second woman in the 108-year history of the society to be elected to the position. During her one-year tenure, Dr. Sirridge plans to focus on issues such as improved health care, particularly for the medically indigent; the role of women in medicine; lower health care costs and better ways to prepare medical students.

■ Four educators from Albany Medical College, Albany, NY, from Feb. 13-15 participated in the second workshop for medical educators to learn about the school's combined B.A./M.D. curriculum, evaluation, and selection processes. They were participants in a program sponsored by the National Fund for Medical Education (NFME). The NFME selected the School of Medicine as one of five model education programs nationally for medical educators to visit.

■ **Mahmoud Ahmed, Ph.D.**, fourth-year medical student **Cathy Spong, Susan Mou, M.D.**, and **Dev Maulik, M.D.**, are authors of "Prospective Study of Cocaine Use Prior to Delivery," which they presented as a poster session at the Feb. 1-4 meeting of the Society of Perinatal Obstetrics in New Orleans. Ms. Spong won first place for an oral presentation of this material at the Midwest Student Medical Research Forum XX Feb. 10-11 in Omaha.

■ **William R. Craig, Ph.D.**, assistant professor of Psychology, has been named superintendent of Western Missouri Mental Health Center, a primary teaching institution for UMKC School of Medicine. Dr. Craig most recently was director of WMMHC's Adult General Psychiatry Program as well as Director of Psychology. He has also held other WMMHC administrative and clinical roles.

■ **Marilyn McGuyre**, director of Student Affairs, is the 1989 recipient of the Faculty Appreciation Award, which the students present each year at Final Annual Provost's Award Night (FAPAN) as a tribute to an outstanding faculty member or administrator. She was selected for her continuing role in helping the students, particularly in the residency match process. Additionally, the Blue-8 team whose docent is **John Chamberlin, M.D.**, won the Snake of Aesculapius Prize that is awarded for academic achievement by a docent team.

■ The sixth annual Len Dawson Celebrity Golf Classic, a benefit for Truman Medical Center-East, will be held May 22 at Longview Lakes Golf Club. National television sportscasters Paul Maguire and Jay Randolph will join Dawson and 57 other national and local celebrities, who in past years have raised more than $300,000 for the hospital. "Our goal this year is to raise $100,000 to help with pediatric development programs," said honorary chairman Dawson, the Hall of Fame former quarterback for the Kansas City Chiefs.

Washington University

■ Researchers at Washington University School of Medicine are seeking healthy volunteers age 40 or older for a brain imaging study to compare brain scans of healthy volunteers and those with neurological disorders such as Parkinson's Disease.

The study's investigators are **Joel Perlmutter, M.D.,** an assistant professor of neurology and neurological surgery and research assistant professor of radiology, and **Lee Tempel, M.D.,** research instructor in neurology. The researchers point out that this is basic research to improve knowledge on how the brain works, not a test to diagnose disease.

For more information, call Lori McGee-Minnich at 314/362-7148 or 314/362-6909.

■ Researchers at Washington University School of Medicine in St. Louis are seeking volunteers for a study testing the effectiveness of two widely used anti-acne medications when used in combination. Investigators are **Ann Martin, M.D.,** instructor in dermatology, and **Jacquelyn Dilworth, M.D.,** assistant in medicine.

Volunteers must be aged 14 or older with mild to moderate acne; excluded from the study are pregnant or nursing women and people who have previously been treated with Accutane.

For more information contact Sharon Jenkins, 314/362-2643.

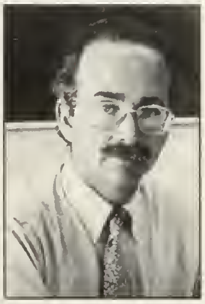
■ Researchers at Washington University School of Medicine are seeking volunteers for a study testing and comparing the reliability of equipment used for ultra high frequency hearing testing. Males aged 25 or younger are needed for the project.

For more information call the Hearing Test Lab, 314/362-7489.

■ **Robert O. Heuckeroth,** a student in the M.D./Ph.D. program at Washington University School of Medicine has been named the 1988 recipient of the Gerty T. Cori Predoctoral Fellowship and Prize.

The award provides support for either a M.D./Ph.D. or a Ph.D. candidate in biochemistry who has displayed outstanding research abilities in carrying out his or her thesis project.

Heuckeroth's research focuses on protein targeting. He works in the lab of **Jeffrey I. Gordon, M.D.,** professor of biochemistry at the School of Medicine.



■ **Jonathan Mann, M.D.,** director of the World Health Organization's Global Programme on AIDS, delivered the Annual Carl G. Harford Lecture on Feb. 20 at Washington University School of Medicine. His lecture was titled "The Global Strategy Against AIDS."

Mann, a 1974 graduate of the School of Medicine, received a master's degree in public health from the Harvard University School of Public Health in 1980.

■ **Leonard Berg, M.D.,** professor of clinical neurology at Washington University School of Medicine in St. Louis, has been selected as a recipient of the 1988 Public Service Award of the St. Louis Chapter of the Alzheimer's Disease and Related Disorders Association.

Dr. Berg was honored for his leadership and guidance in establishing the local chapter, and for his continuing contributions to the growth of the organization. He is director of the Washington University Alzheimer's Disease Research Center (ADRC) and program director of the School of Medicine's Memory and Aging Project.

St. Louis University

■ An inexpensive, fast and accurate method to detect the AIDS antibody in HIV-positive patients has been developed at St. Louis University School of Medicine. **Cheng C. Tsai, M.D.,** professor of pathology, **Stanford T. Roodman, Ph.D.,** professor of pathology and graduate student **Julie M. Sligh, B.S.,** have developed the new procedure called the FIFA method, or Flow Cytometric Immunofluorescence Assay. The research is published in the February 1989 issue of The American Journal of Clinical Pathology.

Dr. Tsai cautions that further clinical testing must be done before the FIFA method can be offered commercially. Development of a commercial test could be at least two years away.

The FIFA method is estimated to cost $35 and is a one-step test. Patients find out whether they carry the AIDS antibody within 45 minutes. In 107 cases tested, the FIFA method proved to have a 100% sensitivity rate and a 100% specificity rate compared to the Western Blot test.

■ **Nicola C. Partridge, Ph.D.,** assistant professor of pediatrics and physiology and assistant research professor of orthopedic surgery at St. Louis University School of Medicine, has been awarded a five-year, $702,293 grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases to study parathyroid hormone regulation of osteoblastic mRNA.

■ **Rebecca L. Aft, Ph.D.,** assistant professor of pediatrics and adolescent medicine, St. Louis University School of Medicine, has received a five-year, $350,000 FIRST award from the National

Institute of Arthritis and Musculoskeletal and Skin Diseases. The grant is given to a first-time researcher.

Dr. Aft is investigating gene expression in muscle cells.

■ **Jung S. Huang, Ph.D.**, associate professor of biochemistry, St. Louis University School of Medicine, has been awarded a four-year, $300,000 grant from the National Heart, Lung and Blood Institute. Dr. Huang and his co-investigator, assistant research professor **Suan Shian Huang, Ph.D.**,will use the grant to study atherosclerosis and the wound-healing process.

■ **Carmine J. Coscia, Ph.D.**, professor of biochemistry, St. Louis University School of Medicine, has been awarded a three-year, $246,687 grant from the National Science Foundation. He will use the grant to continue his research of opioid receptors in the brain. Specifically, the research will focus on the subcellular localization of opioid receptors.

■ **Lisa M. Dunkle, M.D.**, professor of pediatrics and associate professor of microbiology, St. Louis University School of Medicine, has been elected president of the Midwest Society for Pediatric Research. The announcement was made at the Society's annual meeting in Chicago. Dr. Dunkle assumes the presidency in November 1989.

Dr. Dunkle received her medical degree from Johns Hopkins University in 1972 and completed her pediatrics residency at St. Louis Children's Hospital in 1974. She joined the faculty of St. Louis University School of Medicine in 1976. Dr. Dunkle has been secretary-treasurer of the Midwest Society for Pediatric Research for the past five years.

■ **Arnold Kaplan, Ph.D.**, professor of microbiology and acting chairman of the department of microbiology, St. Louis University School of Medicine, has been awarded a one-year, $60,000 grant from the National Science Foundation to study the biochemistry of enzyme sorting.

Dr. Kaplan will study the modification of lysosomal enzymes while they are being synthesized.

■ The Third Annual Heart Transplant Basketball Classic was Feb. 18 at Kiel Auditorium.

The "New Hearts" an all transplant team lost to the"Sports Riders,"a team of writers and editors at the St. Louis Post-Dispatch, during the half time of the St. Louis University Billikens-Xavier College basketball game.

Last year, the "New Hearts" lost to the "Jumping Jebbies," a team of University Jesuits. In 1987, the "New Hearts" shut out a team of media personalities 4-0.

Leslie Miller, M.D., associate professor in the cardiology division, coached the "New Hearts" for the third consecutive year.

All members of the team received heart transplants at St. Louis University Medical Center and have achieved 100% rehabilitation. The medical center's heart transplant support group organized the team and the classic to demonstrate the high quality of life possible after heart transplant, and to raise awareness for the crucial need for donor organs.

■ "Organ Transplants: The Gift of Life from One to Another" was the topic of an all-day symposium sponsored by The University Hospital Auxiliary at St. Louis University Medical Center. The symposium was held on February 15 at SLU School of Medicine. **Jan Blomefield**, director of planning and administrator of the transplant program at The University Hospital, conducted the symposium.

■ "New Technology and Ethical Implications" was the theme for the Fourth Annual Drummond Lectures in Medical Ethics sponsored by the Center for Health Care Ethics at St. Louis University Medical Center. The lectures were delivered by **Kathleen Nolan, M.D., M.S.L.**, Associate for Medicine at The Hastings Center, Briarcliff Manor, NY.

Guest Editorial

continued from page 209

their brusque, sometimes mischievous behavior, their mendacity. The questions of a distraught and difficult patient are perceived as a challenge rather than a plea, and the patient is put down, put in his place.

Suppose such an oncologist through ignorance, stupidity or carelessness makes a fatal error. Questioned he shrugs it off: "He was terminal." Preposterous! Even more preposterous is the peer review committee that accepts this appalling callousness as an exonerating explanation.

It is the callousness of Macbeth, the murderer, standing beleaguered on the ramparts watching his enemies close in. It is then he learns the fate of his murderous wife gone mad from guilt. Seyton approaches him.

Seyton: The Queen, my lord, is dead.

Macbeth: She should have died hereafter.

■

1. Crosby WH: Grand rounds for optimisism in treating acute granulocytic leukemia. *Arch Inn Med* 1974;134:177-180.

2. Crosby WH: The treatment of acute granulocytic leukemia. The tempered approach, in FJ Ingelfinger, RV Ebert, M Finland, AS Rehlman (eds): *Controversy in Internal Medicine II.*Philadelphia, WB Saunders Co, 1974, pp 610-619.

3. Anonymous: It's over, Debbie. *JAMA* 1988;259:272.

Dr. Crosby is the Director of Hematology at the Chapman Regional Cancer Center in Joplin, MO. He is a member of the MISSOURI MEDICINE Editorial Board.

Carafate® for the ulcer-prone NSAID patient

Aspirin and other nonsteroidal anti-inflammatory drugs weaken mucosal defenses, which may lead NSAID users to become prone to duodenal ulcers.[1] For those NSAID users who do develop duodenal ulcers, CARAFATE® (sucralfate/Marion) is ideal first-line therapy. Carafate rebuilds mucosal defenses through a unique, nonsystemic mode of action. Carafate enhances the body's natural healing ability while it protects damaged mucosa from further injury. So the next time you see an arthritis patient with a duodenal ulcer, prescribe nonsystemic Carafate: therapy for the ulcer-prone patient.

Unique, nonsystemic

CARAFATE®
sucralfate/Marion

CAFAD276

Please see brief summary of prescribing information, and reference on adjacent page.

0160N8

1 out of 2 teens in America has taken drugs. 1 out of 2 parents doesn't see it.

See, the Washingtons think it's the Smith kid. The Smiths think it's the Sanchez kid. Maybe the Sanchezes think it's your kid.

Maybe it is your kid.

Find out. Talk to your kids. Tell 'em the dangers of drugs. Tell 'em how to handle peer pressure. Tell 'em you care. It's not easy. But I can help. So write me, McGruff, P.O. Box 362, Washington, D.C. 20044.

Don't let your kids take a powder. Or anything else.

Together, we can help Take a Bite out of Crime.

TAKE A BITE OUT OF
CRIME

Ad Council

A message from the Crime Prevention Coalition, the U.S. Department of Justice, and the Advertising Council © 1988 National Crime Prevention Council

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.**, P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

DePaul Health Center 244
Dodson Insurance 234
Eli Lilly 198
Forrest T. Jones 210
Fred S. James 212
I.C. System 250
Jackson & Coker 234
Key Pharmaceuticals 225,226
Marion Labs 226 A-B, 242 A
MedClaims 208
Medical Defense Associates 237
Medical Protective Company 206, 238
Merck, Sharp & Dohme 251, 252
MOMEDICO 194
Palisades Pharmaceuticals 232
PIE Mutual Insurance Company 222
Professional Data Services 196
Roche 202, 248-249
Risk Control Associates 230
Senior Patient 226
St. Louis Children's Hospital 229
Springer Clinic 244
Trans Global Tours/Metro Med of KC 244
Timberlawn 225
United Missouri Banks 204
U.S. Airforce 236
Wes Woodbury 232

VICE PRESIDENT

MEDICAL AFFAIRS

DePaul Health Center, one of the leading health care organizations in the St. Louis area, has an outstanding opportunity for a Vice President of Medical Affairs.

Reporting to the Chief Executive Officer, the position is responsible for effective discharge of medical staff organizational functions as set forth in the Medical Staff By-Laws and for implementing policies concerning medical staff affairs.

Requires an M.D., licensed in the State of Missouri. Prefer medical/administrative and multi-hospital experience.

DePaul Health Center, a 608 bed community hospital located in suburban St. Louis on a 60 acre campus setting, is a member of the Daughters of Charity National Health System, the largest not for profit system in the country.

We offer an attractive compensation package plus a challenging opportunity in a progressive organization.

Please submit your curriculum vitae in strictest confidence to Ralph Biddy, M.D., Chairman of the Search Committee, Medical Staff Office. **DePaul Health Center, 12303 DePaul Drive, Bridgeton, Missouri 63044.**

**DePaul
Health Center**

An Equal Opportunity Employer

SPRINGER CLINIC

- Dermatology
- Family Practice
- Obstetrics/Gynecology
- Psychiatry
- Pulmonology

Rapid growth of Springer Clinic, a 55 member multi-specialty group, has created opportunities for BC/BE physicians in the above practices.

Competitive guaranteed salary and production incentives initially with partnership opportunities within two years.

Call (918) 495-2631 or send CV to:
**Richard A. Callis, Administrator
Springer Clinic
6160 South Yale
Tulsa, Oklahoma 74136**

Metropolitan Medical Society

Of Greater Kansas City
Offers

Switzerland

Aug. 25 - Sept. 2,1989
Departures From Kansas City & St. Louis

From **$879**
Per person double occupancy

TOUR FEATURES

- Round trip charter air transportation to Basel, Switzerland.
- Four nights in Laax, Switzerland, in a Superior First Class resort hotel complex.
- Three nights in Villars, Switzerland, in a First Class hotel.
- Daily continental breakfast.
- Airport transfers and luggage handling.
- Completely escorted and more.

FASCINATING OPTIONAL TOURS

*Lucerne - Glacier Express & St. Moritz - Italian Lake District - Zermatt and the Matterhorn
Geneva - Gruyeres and Montreux*

SIGN UP SOON!
SPACE IS LIMITED!

OPEN TO MEMBERS,
THEIR FAMILIES AND FRIENDS.

**FOR ADDITIONAL INFORMATION
CALL OR WRITE:
TRANS GLOBAL TOUR, INC.**
8200 Normandale Boulevard, Suite 504
Minneapolis, Minnesota 55437
USA Toll Free: 1-800-328-6264

Classifieds

Physicians Wanted

FAMILY PRACTICE/INTERNAL MEDICINE. WOMEN'S HEALTH. Multi-specialty Clinic. Full or part-time in newly established Women's Health Center. Primary care of women with time and support you need. Nurse Practitioner, Counselor, Dietitian, Wellness and Education staff. Beautiful, new full-equipped clinic. Guaranteed annual salary, generous benefits, time away, partnership after first year. Progressive community of 32,000. Draw of 150,000. Send C.V. to Mark Johnson, M.D., 810 N. Eisenhower, Mason City, IA 50401 or call 515/421-5686.

ORTHOPEDIC SURGEON — BE/BC. Progressive JCAHO hospital and medical staff located in University community of Northwest Missouri is seeking orthopedic surgeon to serve people in area with high sports interest, high percent of elderly, and documented desire and need for specialty services. Community provides hometown livability with big city accessibility. Located approximately two hours from Kansas City, Omaha, and Des Moines. Contact: Martin Goedken, VP, St. Francis Hospital, 2016 South Main Street, Maryville, MO 64468-2693 or call collect: 816/562-2600, Ext. 5001.

EMERGENCY DEPARTMENT PHYSICIAN: St. Anthony's Medical Center in South St. Louis County is seeking a physician to join the Emergency Department immediately. Our 20-bed Emergency Department provides care for 49,000 patients annually with triple physician coverage during peak hours and 24-hour pediatric coverage. An excellent salary and benefits package is offered. Contact Raana Ponstingl, M.D., Medical Director, Emergency Department, St. Anthony's Medical Center, 10010 Kennerly Rd., St. Louis, MO 63128; 314/525-1905.

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

INTERNIST — BE/BC. For progressive community in Northwest Missouri with State University. Solo or join established internist. Excellent JCAHO Hospital Facilities including CT Scanning, Ultrasound, Nuclear Medicine, Doppler Studies, Endoscopies, Cardiac Stress Testing, Holter Monitor. Good physician complement available with subspecialty representation. Contact Martin Goedken, VP, St. Francis Hospital, 2016 South Main, Maryville, MO 64468; 816/562-2600.

FAMILY PRACTICE — BE/BC. To join established practice of Obstetrician and Family Practitioner. For progressive community in Northwest Missouri with State University. Excellent JCAHO hospital facilities. Good physician complement available with subspecialty representation. Contact: Martin Goedken, VP, St. Francis Hospital, 2016 South Main, Maryville, MO 64468; 816/562-2600.

NASHVILLE, SOUTHEAST: Seeking full-time and part-time physicians for growing emergency department. Attractive salary and complete malpractice insurance coverage. Benefit package available to full-time staff. Contact: Emergency Consultants, Inc., 2240 S. Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

FAMILY PRACTICE/INTERNAL MEDICINE — Attractive opportunities for BC/BE Family Practice and Internal Medicine physicians in a variety of settings in the *Midwest* (many on lakes). Contact Bob Strzelczyk to discuss *your* practice requirements and these positions. STRELCHECK & ASSOCIATES, INC.; 12724 N. Maplecrest Lane, Mequon, WI 53092; 1-800-243-4353.

PEDIATRIC OR RETINAL OPHTHALMOLOGIST, Kansas City. Fellowship-trained Pediatric-Strabismus or Retinal Ophthalmologists to join board certified Generalists and establish first subspecialty department. Ultramodern office with state-of-the-art equipment and vigorous growing practice. Some general Ophthalmology until subspecialty established. Ethical. Stimulating environment-clinical research — 40 papers published from our practice. Exceptional offer — salary, fringes, production incentive. Contact: John C. Hagan, III, M.D.,FACS, Midwest Eye Institute of Kansas City, 2700 Hospital Drive, North Kansas City, MO 64116.

ONE PSYCHIATRIST — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board Certified or Eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, Board Certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care

Physicians Wanted

center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). **For information contact:** Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

EMERGENCY MEDICINE, COLUMBIA: Emergency Physician wanted for private, not-for-profit hospital in university town. Medical staff and facility are progressive and state-of-the-art. Competitive salary and benefits which include paid malpractice insurance (occurence!), health insurance, dental insurance, educational leave and one-month paid vacation. Freestanding emergency clinic and rural health clinic shifts also available. Interested physicians should send CV and letter of inquiry to Roger Willcox, M.D., FACEP, Director of Emergency Services, Boone Hospital Center, 1600 E. Broadway, Columbia, MO 65201.

MEDICAL DIRECTOR – Opening for board-certified internist and/or physiatrist as director of in/out-patient rehab programs in CARF and JCAH-accredited Missouri Rehabilitation Center. The area provides country living close to metropolitan area with Ozarks recreational opportunities. EEO/AA. Call Don Lamkins, Director, Missouri Rehabilitation Center, 600 N. Main, Mt. Vernon, MO 65712. 417/466-3711.

CME Cruise/ Conference

1989 CME CRUISE/CONFERENCES on Medicolegal Issues and Risk Management – Caribbean, Mexico, Alaska/Canada, China/Orient, Scandinavia/Russia, Mediterranean, Black Sea, Trans Panama Canal. Approved for 24-28 CME Category 1 Credits (AMA/PRA) and AAFP prescribed credits. Excellent group rates on finest ships. Pre-scheduled in compliance with IRS requirements. Information: International Conferences, 189 Lodge Ave., Huntington Station, NY 11746. 1-800-521-0076 or 516/549-0869.

Services

IS BUYING A COMPUTER REALLY THE ANSWER TO YOUR PRACTICE MANAGEMENT NEEDS? ASSOCIATED BILLINGS' medical management service is a better answer. We are experts in insurance administration, accounting and data processing. In the St. Louis area, call 314/942-2072 for more information at no obligation. It pays to use a specialist!

PHYSICIANS. PROVIDER PLACEMENT SERVICES specializes in the relocation of physicians throughout the U.S., with special emphasis in the southeast. Currently, we have several hospitals/clinics/groups with openings. All fees paid by employer. All inquiries kept in strict confidence. No obligation. Send CV/Resume to: PPS, ATTN: Mr. Scott, 2221 University Blvd., West, Jacksonville, FL 32217, or call toll free 1-800-848-8722.

Investment

$5,000-$60,000: FOR PHYSICIANS – Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including Taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Equipment for Sale

MEDICAL OFFICE EQUIPMENT from Ambulatory Care Center, that includes Laboratory and X-Ray equipment, Audio booth, Holter Monitor and large trash compactor. Used 1½ years. If interested call 417/869-7006. Ask for Sybil.

CYSTO AND RESECTOSCOPE SET. New in boxes. Stortz instrument. Never have been used. Will sell for less than current market price. Also have loops, cold light source, cords. Pediatric set also available. Send inquiries to: **File #24,** c/o **Missouri Medicine,** 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

USED ENDOSCOPY EQUIPMENT. Gastroscopes, Colonoscopes and Bronchoscopes. Olympus, Pentax and Fuji. Will deliver, set up and in-service. LEE ALLARD, 8700 W. 124th, Suite 1, Overland Park, KS 66213, or 913/681-3580.

MISSOURI MEDICINE

Classified Advertising Form

. Please print or type all information requested and return this form to Valerie A. Peters, Editorial Assistant, MISSOURI IEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. **Deadlines for publication are the first of the onth preceding the month of publication.** The deadline is the same for cancellation of a current ad. For example: n ad to run in the November issue should be received by MISSOURI MEDICINE no later than October 1. An ad running the October issue that the advertiser wants to cancel for November should also be cancelled, in writing, no later than ctober 1. **Classified advertising costs:** $25.00 for non-members for the first 50 words or less, and 25¢ per word after at. The cost is $15.00 for members for the same ad, plus 25¢ per word beyond 50 words. File numbers cost an extra $1.25.

IAME ____________________

DDRESS ____________________

ITY ____________ **STATE** ____________ **ZIP CODE** ____________

IGNATURE ____________ **TELEPHONE** ____________

. Check here if you want your ad to run continuously until you cancel. If you want to specify only certain months, skip this and go to number 3. ☐

. Check here to specify the months your ad should run. Place the last two digits of the year in the blanks. Check to be sure you mail the ad prior to the deadline. No late ads will be accepted.

☐ Jan. 19 ___ ☐ April 19 ___ ☐ July 19 ___ ☐ Oct. 19 ___
☐ Feb. 19 ___ ☐ May 19 ___ ☐ Aug. 19 ___ ☐ Nov. 19 ___
☐ Mar. 19 ___ ☐ June 19 ___ ☐ Sept. 19 ___ ☐ Dec. 19 ___

4. Check here if you want ad responses sent to you via a File number. This costs an additional $1.25. ☐

5. Check the heading you want your ad placed under.

☐ Art For Sale ☐ Physician Wanted ☐ Practice For Sale ☐ Position Wanted
☐ Equipment For Sale ☐ Locum Tenens ☐ Misc. For Sale ☐ Services
☐ Real Estate ☐ Other ____________________

6. Check method of payment:

☐ Check made payable to MSMA. Amount $ ________
☐ Please bill me.

7. Use the lines below to print or type the ad exactly as it should appear. Additional paper may be used to complete the ad.

YOUR ROCHE REPRESENTATIVE WOULD LIKE YOU TO HAVE SOMETHING THAT WILL...

ROCHE ®

... improve patient satisfaction with office visits.

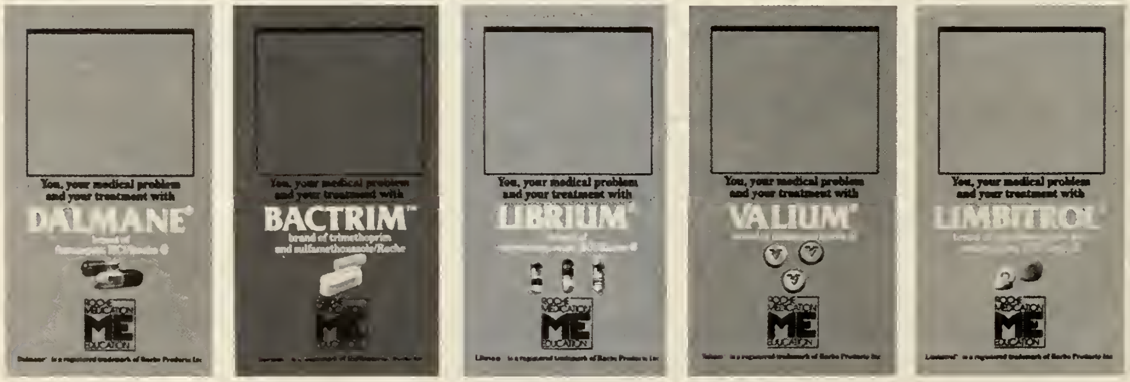
... improve patient compliance with your instructions.

... reduce follow-up calls to clarify instructions.

Roche product booklets ...

- **offer a supplement to, not a substitute for, patient contact.**
- **support your specific instructions to the patient.**
- **provide a long-term reinforcement of your oral counseling.**
- **are available in *Spanish*.**

Because you are the primary source of medical information for your patients, we invite you to look over the Roche product booklets shown below. Ask your Roche representative for the new catalog brochure of patient education materials and for a complimentary supply of those booklets applicable to your practice.


You, your medical problem and your treatment with
DALMANE
BACTRIM
brand of trimethoprim and sulfamethoxazole/Roche
LIBRIUM
VALIUM
LIMBITROL
ROCHE MEDICATION ME EDUCATION

ROCHE
MEDICATION
ME
EDUCATION

Working today for a healthier tomorrow

COMMITTED TO EXCELLENCE

ROCHE

PRESIDENT'S ACHIEVEMENT AWARD

Presenting the winners of the 1989 Roche President's Achievement Awards

Roche Laboratories is proud to honor these outstanding sales representatives, chosen for their unparalleled dedication to the health-care field, professionalism and consistent high level of performance. Please join us in congratulating these exceptional individuals.

James E. Outman

Richard L. Pearson

Daniel C. Stern

Mary Sweetwood

Donald P. Weaver

Turn to the preceding page and find out how your award-winning Roche representative can help both you *and* your patients.

You didn't spend umpteen years in school in order to become a bill collector.

There's one critical procedure you're not adequately prepared to perform: inducing a flow of cash from slow-paying patients. Besides, you have far better ways to spend your time.

Which is why we suggest you engage the services of I.C. System.

First of all, we have the expertise and resources to do the job. What's more, we understand that we're dealing with *your* patients. You don't want to alienate or offend them. And we conduct ourselves accordingly.

In fact, our work is endorsed by over 1,200 professional associations and societies, including your own. And although we're headquartered in St. Paul, Minnesota, we have communication centers in every state of the union.

We'll assign a local I.C. representative to your account who will be supported by a full range of collection services and personnel, including carefully-trained telephone contact specialists. We'll even provide training on how to use our service for the person(s) in your office handling accounts receivable.

But most important, we *guarantee* results. Our fee structure combines a very competitive commission rate with a retainer (corporate or standard) scaled to your needs. And we guarantee to keep collecting for as long as it takes to recover *at least ten times the amount of that retainer.*

To find out how the I.C. System approach can work for you, call toll free (800) 443-4123, ext. 621. In Minnesota, call (612) 483-8201, ext. 621. Or return the coupon.

I.C. System®
The System Works.™

I want to recover the money that's owed me. Please provide me with information on the I.C. System approach.

Name____________________

Title____________________

Firm____________________

Address____________________

City____________________

State__________ Zip__________

Telephone number____________________

3385-1

Mail to: I.C. System, Inc.
444 East Highway 96, P.O. Box 64639
St. Paul, Minnesota 55164-0639

VASOTEC®

(ENALAPRIL MALEATE | MSD)

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema.* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident.

If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis. Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia. Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension. Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE. As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium. VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use. Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

Hypertension. The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category.

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest; pulmonary embolism and infarction; rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital. Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy.

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other. Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia; an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema. Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486

J6VS18R(815)

MSD
MERCK
SHARP&
DOHME

IT MAY CHANGE THE WAY YOUR PATIENTS FEEL ON ANTIHYPERTENSIVE THERAPY

MSD
MERCK
SHARP&
DOHME

FOR MANY HYPERTENSIVE PATIENTS
START WITH ONCE-A-DAY
VASOTEC®
(ENALAPRIL MALEATE | MSD)

For a Brief Summary of Prescribing Information, please see next page of this advertisement.

Copyright © 1987 by Merck & Co., Inc.

J6VS18R

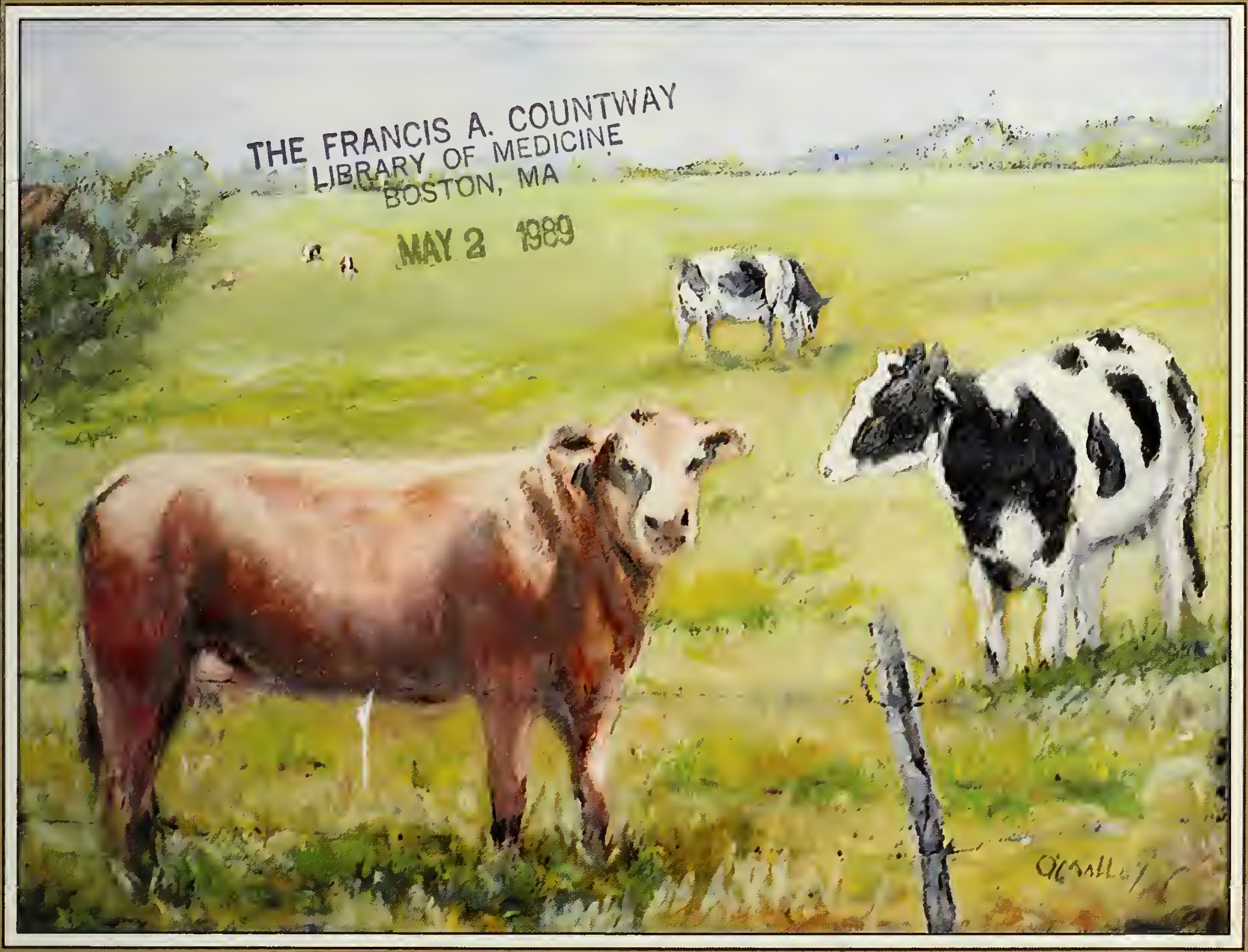
EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

Journal of the Missouri State Medical Association

May 1989

[redacted]



THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

MAY 2 1989

You didn't go into medicine to become a human target.

Every day you put your reputation and practice on the line. And, with the increasing barrage of malpractice claims, your business has become a virtual firing line.

Now, you can do something about it. Protect yourself with MOMEDICO. We're the only physician owned professional liability insurance company founded and endorsed by the Missouri State Medical Association. MOMEDICO is a stock insurance company rather than a mutual assessable company. The overwhelming majority of our stock and policy holders are Missouri physicians.

At MOMEDICO we are proud of our reputation for highly trained and totally committed field service representatives. Our reputation for results is outstanding, too. Of all cases handled to conclusion, over 80% were closed without any payment of indemnity. So, if you find yourself on the firing line, MOMEDICO is the company that lines up to protect you.

MOMEDICO. . .the best company a physician can keep.

MOMEDICO

Better Protection. Together.

10795 Watson Road
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

Contents

Cover

"Missouri Pasture," 16" × 20" oil painting by James F. O'Malley, M.D. of Leawood, KS. Dr. O'Malley is a urologist in Kansas City and has been painting for more than 40 years.

Guest Editorial

269 **Fitness of the Future**
John C. Hagan III, M.D., *North Kansas City, MO*

Scientific Articles

271 **Bronchopulmonary Sequestration**
Carson Agee, M.D., Joseph T. Walls, M.D., Jack J. Curtis, M.D. and Zuhdi Lababidi, M.D.
Columbia, Missouri

275 **Prolonged Spontaneous Remission of Case of Malignant Lymphoma**
Jack W. Wolf, M.D., *Kansas City, Missouri*

278 **Large Cell Lymphoma Presenting as a Coronal Penile Lesion**
Graham C. Scott, M.D., *Columbia, Missouri*
Peter C. Ungaro, M.D., John Cashman, M.D., and Jorge J. Gonzalez, M.D., *Wilmington, North Carolina*

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
MAY 2 1989

Departments

259 Progress Notes
263 Editor's Desk
265 Auxiliary Message
267 Practice Management
283 Continuing Medical Education
287 New Members
291 Medical School News
295 Information for Contributors
295 Index to Advertisers
298 Classified Advertising Form
299 Classifieds

MSMA PHONE BOOK

Missouri State Medical Association
314/636-5151
American Medical Association
312/645-5000
MSMA Physicians' Health Program
314/768-4990
MOMEDICO
1-800-392-8039
Dodson Insurance Group
1-800-825-3760
MSMA Retirement Plan/ E. F. Hutton
(Call collect) 314/725-9690
Forrest T. Jones
1-800-892-7272
Fred S. James
KC 1-800-892-7105
St. Louis 1-800-445-9513
Health Care Financing Administration
816/426-5233
Intrav
314/727-0500
Medicaid Provider Relations
1-800-392-0938
Medicare Provider Relations
1-800-392-3070
Medicare Part B Blue Cross Blue Shield
Kansas City
1-800-654-9629
Missouri Department of Health
314/751-6400
Missouri Department of Social Services
314/751-2086
Missouri Patient Care Review Foundation
(Preadmission) 1-800-392-8060
(General Info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs
314/751-8042
Missouri State Board of Registration of the Healing Arts
314/751-2334

At Last, The Cure Has Been Found!

And now you'll never be plagued with poor retirement planning.

Retirement, like physical well-being, is a condition. A state of being. And in both cases, it's up to you to see that you're in good form, either physically or fiscally fit.

To insure a happier and financially-healthier retirement, you should seriously consider the MSMA Retirement System. Many MSMA members have already taken advantage of this comprehensive plan that covers pre-retirement, retirement, and post-retirement planning through a personalized strategy based on the needs and goals of you and your employees.

Of course, like any remedy, if its not put to use, you can't benefit from it. Don't take risks with your retirement—find out about the MSMA Retirement System today. For a free informational audio cassette with all the details, call us or send in the coupon below.

MSMA Retirement System c/o Prudential-Bache Securities
231 S. Bemiston Ave., St. Louis, MO 63105
ATTN: Michael G. Grimes
314-721-9200, toll free **1-800-877-9200**

☐ Yes, send me a MSMA Retirement System audio tape today!

Name ________________ Address ________________

City ________ State ________ Zip ________ Phone (   ) ________

Clients, please give name and office of Account Executive. ________________

Missouri State
Medical Association

© 1989 Prudential-Bache Securities. Member SIPC

Missouri Medicine

Vol. 86, No. 5 *Journal of the Missouri State Medical Association* May 1989

Editor
Donald G. Sessions, M.D.
Associate Editor
Ramona M. Chapman, M.D.
Editor Emeritus
Jordan W. Burkey, M.D.
Managing Editor
Susan Flanigan Gold
Business Manager
Royal O. Cooper
Editorial Assistant
Valerie A. Peters

EDITORIAL BOARD

Anesthesiology
Mark G. Zukaitis, M.D.
Cardiovascular Surgery
Jack J. Curtis, M.D.
Dermatology
Philip C. Anderson, M.D.
John DeSpain, M.D.
Ernest Lorenc, M.D.
Emergency Medicine
David M. Trantham, M.D.
Family Practice
William D. Bradshaw, M.D.
Carl R. Kruse, M.D.
Kirby L. Turner, M.D.
Gastroenterology
Jay P. Marshall, II, M.D.
Hematology
William H. Crosby, M.D.
Internal Medicine
John S. Daniels, M.D.
Stephen Hamburger, M.D.
Robert K. Skillman, M.D.
Neonatology
Elizabeth J. James, M.D.
Neurosurgery
Keith Rich, M.D.
Obstetrics and Gynecology
James Daly, M.D.
Oncology
Michael C. Perry, M.D.
Ophthalmology
John C. Hagan, III, M.D.
F. Thomas Ott, M.D.
Orthopedics
William P. Thorpe, M.D.
Otorhinolaryngology
J. Regan Thomas, M.D.
Pathology
Scott A. Martin, M.D.
Pediatrics
R. Don Blim, M.D.
Physical & Rehabilitation Medicine
Paul E. Kaplan, M.D.
Plastic Surgery
LeRoy Young, M.D.
Psychiatry
William F. Clary, M.D.
J. C. Corvalan, M.D.
Radiation Therapy
MacDonald B. Logie, M.D.
Radiology
Donald R. Germann, M.D.
General Surgery
Mark S. Cotner, M.D.
Richard O. Craig, M.D.
Donald Silver, M.D.
Vascular Surgery
W. Kirt Nichols, M.D.
Urology
George M. Austin, M.D.

PUBLICATIONS COMMITTEE

Chairman
Donald G. Sessions, M.D.
Vice-Chairman
Ramona M. Chapman, M.D.
Members
Jack J. Curtis, M.D.
John S. Daniels, M.D.
Stephen Hamburger, M.D.

MSMA Officers

President	T. J. Cooper, M.D., *St. Louis*
President-Elect	Marvin A. Singleton, M.D., *Joplin*
Secretary	Norman P. Knowlton, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Kenneth R. Smith, Jr., M.D., *St. Louis*
Vice President	William R. Richardson, M.D., *Union*
Vice President	Herman J. Hausheer, M.D., *Independence*
Speaker	Arlen D. Winsky, M.D., *Springfield*
Vice-Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*

Councilors

Gary A. Dyer, M.D., *St. Joseph*, Chairman
Dorothy D. Reister, M.D., *Kansas City*, Vice Chairman
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *St. Louis*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
Carol F. Williams, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Louis*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A. J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Raymond J. Caffrey, M.D., *Independence*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Evan Saunders, medical student, *St. Louis*
Charles Barbee, M.D., *Columbia*
Victoria Martin, M.D., *Shawnee Mission, KS*

Vice Councilors

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Carl R. Kruse, M.D., *Palmyra*
Meredith Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Mark W. Martin, M.D., *Lee's Summit*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Carole Matteri, medical student, *St. Louis*
William Dorzab, M.D., *Kansas City*
Charlene Prather, M.D., *Kansas City*

AMA Delegates

Robert MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*
George M. Bohigian, M.D., *St. Louis*
Melvin C. Kasten, M.D., *Cape Girardeau*
Vernon H. Balster, M.D., *St. Louis*
Walter A. German, M.D., *Springfield*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251

Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.

Subscription rates: $20 per year.

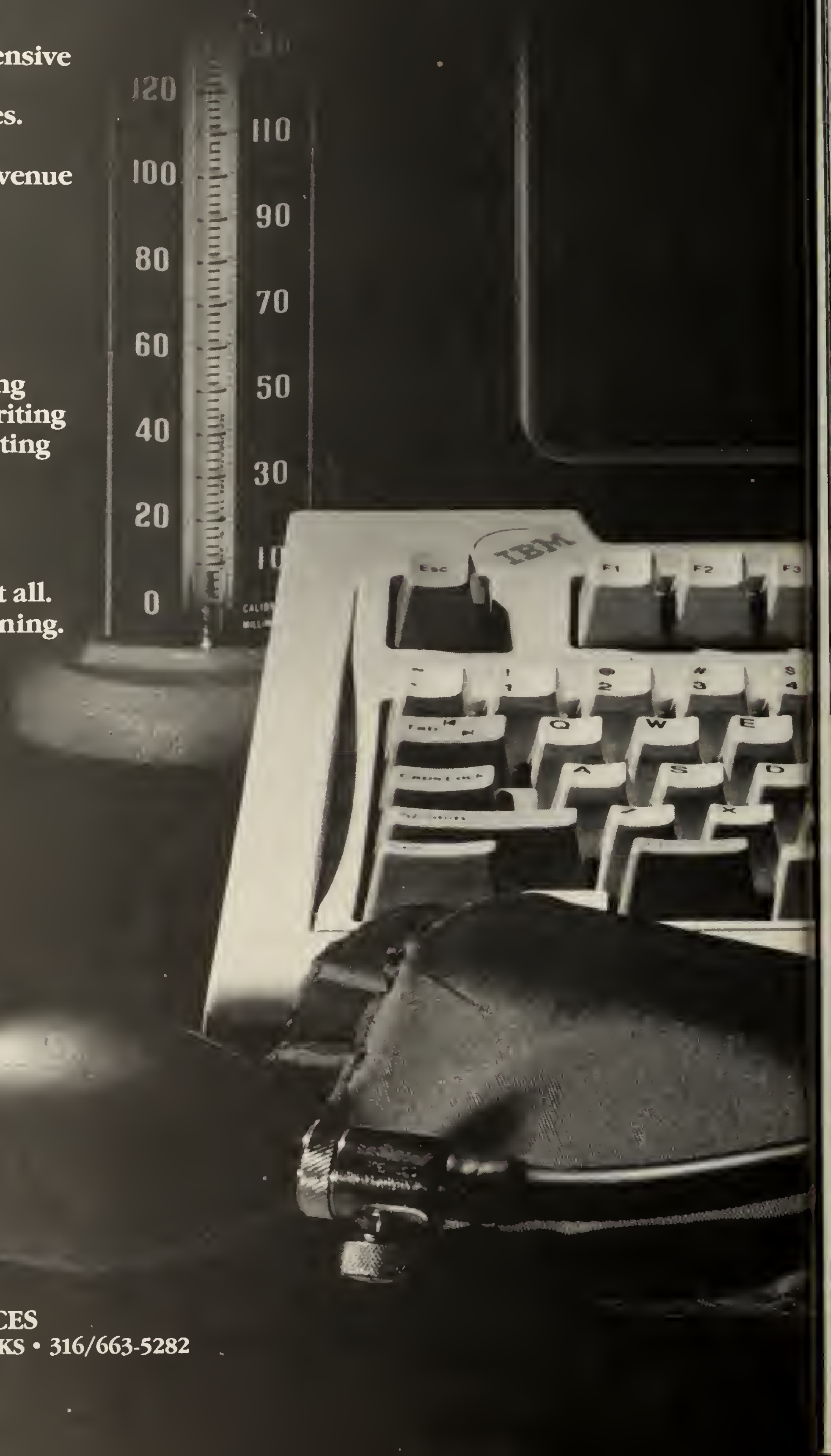
Second class postage paid at Jefferson City, Missouri and at additional mailing offices.

Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Department, P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.

Copyright © 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

PRESSURE.



Relieve it. With our comprehensive computer system designed specifically for medical offices.

- Accounts receivable with revenue reporting
- Insurance processing with electronic claims
- Specialized HMO reports
- Comprehensive general accounting
- Collections with letter writing
- Appointments with letter writing
- Patient recall with letter writing
- IBM hardware
- Periodic user seminars
- ...and much more

It's easy because we provide it all. IBM hardware. Software. Training. Ongoing support. PDS. In business since 1973... with more than 100 satisfied customers. PDS. To help you manage your office even better.

PDS

PROFESSIONAL DATA SERVICES
3 Compound Drive • Hutchinson, KS • 316/663-5282
Kansas City • 913/491-3644
Lincoln, NE • 402/476-9322

MSMA Progress Notes

Conomikes hires Dr. Woerth

Janice K. Woerth, Ph.D., who writes the monthly Practice Management column for Missouri Medicine, was recently hired by Conomikes and Associates, Inc., of Los Angeles. A Kansas City resident, Dr. Woerth will serve as a consultant/faculty member for the California-based medical consulting firm. Conomikes conducts the various medical workshops sponsored annually by MSMA.

Dr. Woerth has an extensive background for health care consulting. She has served as Executive Director of Faculty Practice and Associate Professor of Dentistry at UMKC; Administrator of Continuing Education and Associate Professor, University of Kansas Medical Center; Director of the Women's Leadership Institute of Avila College and President of J.K. Woerth, Inc., serving as a consultant in CPT/ICD-9 coding, practice management and marketing.

Dr. Woerth will continue to write her monthly column for MISSOURI MEDICINE. ■

State crossover claims payment under review

HCFA notified the Missouri Department of Social Services (DSS) in February that they would review processing and payment of claims for medical services provided to persons who are eligible for both Medicaid and Medicare. MSMA reminds physicians of the following guidelines:

1. Individuals receiving cash assistance such as AFDC, SAB, or SSI and also eligible for Medicaid are **buy-in recipients.** The State pays for their Part B premium.

2. Individuals eligible for Medicaid and Medicare, but not receiving cash assistance, must **buy their own** Part B premium. Many nursing home recipients fall in this category.

3. Under the Medicare Catastrophic Health bill, some self-pays will be Qualified Medicare Beneficiaries, and the State will buy their premium.

Medicare coverage under Part B is greater than that of Medicaid. States are optionally able to pay the full range of Part B services regardless of the coverage available under the Buy-In agreement. Benefits for dually-entitled recipients not eligible for Buy-In (Number 2 above) are limited to the State Plan.

Our current Medicaid State Plan covers the entire range of Medicare Part B benefits and **reimburses the coinsurance imposed under Medicaid for all dually entitled recipients.**

Since federal regulation prohibits state coverage of Part B benefits greater than those covered by the State Plan for dually-entitled, self-paying recipients, our State Plan authorizing such coverage must be changed.

When an effort was made to do this last April, the Joint Committee on Administrative Rules recommended the DSS not file such a regulatory change. Later SB 494 placed this recommendation in law.

A July 22, 1988 letter from HCFA states that "HCFA will initiate safeguards to protect the federal government's interests. These safeguards will include disallowance of the estimated quarterly Medicaid overpayment for all inappropriate paid crossover claims. The overpayment could be retrospective for three years.

A January 30, 1989 letter from HCFA indicates their intent to begin an audit of our crossover claims processing system shortly. ■

MSMA goes smoke free

On May 1, the Missouri State Medical Association buildings at 113 and 115 Madison will become smoke free. This rule applies to all MSMA members, staff, guests and vendors. This policy is consistant with our position on smoking as it relates to health.

We appreciate everyone's compliance with this rule.

■

AMA supports petition in Cruzan case

AMA trustees have agreed to support a petition to the U.S. Supreme Court brought by the parents of a woman in a vegetative state, who seek to have her life supports withdrawn.

Nancy Cruzan has been in a persistent vegetative state for five years, and the AMA had advised the Missouri Supreme Court of the Council on Ethical and Judicial Affairs' opinion permitting withdrawal of life supports under certain conditions.

However, that court reversed the trial court's order permitting the withdrawal, prompting the petition to the U.S. Supreme Court. Cruzan's father had personally appealed to the AMA to support the new petition.

■

Division of Insurance report proves MOMEDICO's excellence

The Statistical Section of the Division of Insurance recently released its latest report on medical malpractice titled "Medical Malpractice in Missouri 1985-1987." The report is compiled from data provided to the Division of Insurance from all entities providing professional liability insurance in the state, including self-insured programs. The data reveals emphatically that MOMEDICO closes far more claims without any payment of indemnity than any of the other major professional liability insurance carriers in the state (see table below).

The Missouri State Medical Association formed MOMEDICO more than 10 years ago in order to assure a continuous stable market of professional liability insurance for the physicians in Missouri — a company which would protect the professional reputation of its policyholders. MOMEDICO's claims philosophy has always stressed a vigorous defense of all non-meritorious claims. The statistics prove that MOMEDICO places the integrity of its insureds above any short-term monetary gains obtained through quick settlements of non-meritorious claims.

■

Missouri Closed Claims Study*
Percentage of Claims Closed
With No Payment of Indemnity

Calendar Year:	1987	1986	1985
MOMEDICO	83%	79%	83%
MDA	68%	72%	74%
RCA	41%	45%	40%
St. Paul	67%	71%	57%
Med Pro	61%	56%	42%
Industry Average	68%	67%	61%

***Medical Malpractice in Missouri 1985-1987**
Statistical Section Missouri Division of Insurance

Reminder of Self-Prescribing Violations

A large number of physicians are not aware of a change made to the Practice Act in 1987. The most noted area of misunderstanding is the prohibition of self-prescribing and the prescribing in the absence of a physician/patient relationship. Both violations are regularly reported to the Board of Healing Arts by agencies charged with enforcement of drug and pharmacy laws.

Section 334.100.2(4)(h) and (22) RSMo Supp. 1988 indicates that the Board may cause a complaint to be filed with the administrative hearing commission...against any holder of any certificate of registration or authority, permit or license...for any one or any combination of...:

(h) Signing a blank prescription form; or dispensing, prescribing, administering or otherwise distributing any drug, controlled substance or other treatment without sufficient examination or establishment of a physician/patient relationship, or for other than medically accepted therapeutic or experimental or investigative purposes duly authorized by a state or federal agency, or not in the course of professional practice, or not in good faith to relieve pain and suffering, or not to cure an ailment, physical infirmity or disease; or the writing of a prescription by anyone other than a properly licensed physician, including but not limited to, the writing of prescriptions by anyone under a physician's supervision, control, instructions or protocol if such person is not a physician;

(22) A pattern of personal use or consumption of any controlled substance unless it is prescribed, dispensed or administered by another physician who is authorized by law to do so;

Physicians should be aware of this change. If you have questions, contact the State Board of Registration for the Healing Arts. ■

Missouri Register Update

The following item appeared in the April 3, 1989 *Missouri Register:*

AIDS: The Department of Health published a proposed rule and final rule.

●19 CSR 20-26.030, Human Immunodeficiency Virus (HIV) Antibody Test Consultation, is a proposed rule that defines the manner in which the sampling and consultation for HIV-antibody testing is to be administered.

●19 CSR 20-33.010, Approval of Laboratories for the Performance of Serologic Tests for Human Immunodeficiency Virus Antibodies in Blood, establishes procedures and requirements for laboratories performing serologic tests on serum or plasma for detection of antibodies to HIV in order to be approved to conduct HIV tests by the Department of Health. This final rule became effective April 13, 1989. ■

Are You Up for an Adventure?

INTRAV and **MSMA** offer you the chance to see the world!

Take advantage of the traveling medical seminars offered by **INTRAV.** Offered to all Members, Families and Friends of the Missouri State Medical Association. See incredible sights and gain valuable medical information at the same time while traveling by boat, plane or train throughout the world!

Trips available:

Orient Express Adventure—July 7-19, 1989
Wind Spirit - Italy/Adriatic Air/Sea Cruise — July 12-24, 1989
Danube River Adventure — July 23 - August 4, 1989
Wings Over the Nile — October 27 - November 9, 1989

For more information, write:
Missouri State Medical Association
ATTN: Mary Wiegers
P.O. Box 1028
Jefferson City, MO 65102
Or phone: 314/636-5151

Don't miss out — Call today!

AXID®

nizatidine

Enhances compliance and convenience

Patients appreciate Axid, 300 mg, in the Convenience Pak

In a Convenience Pak survey (N = 100)[1]

- *100% said the directions on the Convenience Pak were clear and easy to understand*
- *93% reported not missing any doses*

Pharmacists save time – at no extra cost

- *The Convenience Pak saves dispensing time and minimizes handling*

The Convenience Pak promotes patient counseling

- *Pharmacists dispensing the Axid Convenience Pak can encourage compliance and continued customer satisfaction*

Lilly
Once nightly
Convenience Pak
AXID
nizatidine capsules
300 mg
Lilly
Once nightly
Convenience Pak
AXID
nizatidine capsules
150 mg

Convenience Pak is available at no extra cost

Lilly

Eli Lilly and Company
Indianapolis, Indiana
46285

AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General* – 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects

Laboratory Tests – False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions – No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy – Teratogenic Effects – Pregnancy Category C – Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers – Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother

Pediatric Use – Safety and effectiveness in children have not been established.

Use in Elderly Patients – Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine

Hepatic – Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects

CNS – Rare cases of reversible mental confusion have been reported.

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic – Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental – Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported

Hypersensitivity – As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms – There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively

Treatment – To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

---

1. Data on file, Lilly Research Laboratories.

NZ-2907-B-949310 © 1989, ELI LILLY AND COMPANY

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

What is the part we as physicians can play in the changing patterns of patient care? It is time for physicians to take creative control in the process.

A Phone Call

It is toward the end of the day. I have seen about 30 patients this afternoon, and I am beginning to drag a little — my euphemism for getting tired. There is a knock on the door; my secretary tells me there is a phone call I need to answer. It is an elderly man with a gruff voice. He is calling about a patient I admitted to the hospital yesterday. He says he is a doctor calling for a health organization.

"Your patient is not sick enough to be in the hospital," he says,"and needs to be discharged. We will pay for the treatment at home, and which nursing service would you like to use for the therapy?"

I am shocked and surprised. I did not realize that we were taking care of the patient together. I wonder if he has seen the patient. From the certainty in his voice it sounds like it. He is much more sure of the patient's future course than I am. I react by asking what this "doctor" is talking about. Instead of talking about the patient, he names the two health nursing services that can take over care of the patient at home. His company will pay for that but not for any more hospitalization.

I have these funny questions in my mind. Who is this guy? Is he really a doctor? What does he have to do with the patient I am taking care of? Where did he get his information? Is there a medical basis for his statements? Do I have a choice in the matter? Is he making a suggestion or telling me what to do? If I do what he says and the patient gets sick will he be responsible to the patient? What if I don't agree with him? What about the patients in the exam rooms waiting for me? I take the easy way out and tell him that I cannot discuss it right now and will get back to him later after my office hours.

These are interesting times in which to practice medicine. The "third party" is in the process of becoming a full-fledged member of the doctor-patient relationship. Of course, the "third party" is really "the third parties" — the government, private insurance companies, health maintenance organizations, independent practice plans, business coalitions, independent private cost control companies and so forth. It appears clear that their primary concern is economic. Initially, patient care reviews were made by secretaries and questionable cases were studied by physician reviewers. Since the economic stakes are so high, the reviewers are becoming more aggressive. New companies promise rigorous review, denial of "unnecessary" care, extraordinary cost control, and huge savings.

Times change. We are definitely in a time of changing patterns of care. We all are concerned about how this will affect the "quality" of care for the patient. We are concerned about how it will affect us personally, our families, and our lives. What are the advantages that can occur from this relentless ongoing process? What is the part we as physicians can play? It is time for physicians to take creative control of the part of the process where they are the acknowledged leader — in the domain of medical care based on science, medicine, and a quality of interaction with patients based on dignity, respect, and integrity. At the same time, we need to be rigorous as a group — an association

continued on page 270

MEDICAL PROFESSIONAL LIABILITY INSURANCE

Playing Leapfrog?

It's a kid's game. Great! Except that you're not a kid anymore. You're a health-care professional who doesn't have time for games, ESPECIALLY when it comes to your **medical liability insurance.**

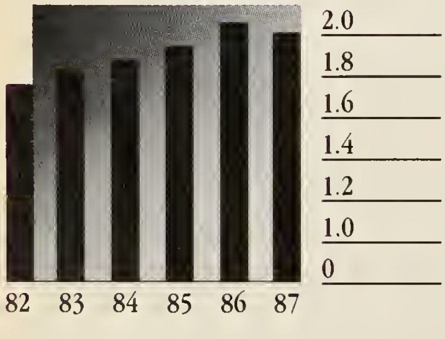
Remember your last insurance company? When it came time for renewal, they played "hide 'n' seek" and disappeared. Completely. And remember that other insurance company that enticed you with super-low premiums, and then gave you renewal rates that made you "jump over the moon?"

Stop playing someone else's game, and talk with us at Medical Defense Associates. **MDA is a not-for-profit medical liability insurance company** that was formed by doctors to serve only doctors.

For over 12 years now, MDA has been offering consistently competitive rates and superior career protection. We have a reputation for protecting YOUR reputation with aggressive defense of unmerited claims. As a result, **MDA insures more of Missouri's doctors than any other medical liability insurance company.**

Settle on the winner. We don't play games.

Insured During The Year — FTE Basis
Thousands



Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

Auxiliary Message

by Pattye Barbee
MSMAA President

If we did nothing else except support and befriend each other, we would justify our existence. But in fact, we do a great deal more.

Bloom Where You're Planted

As I perused the files in preparation for assuming the responsibility of this office, I was struck by the essence of continuity in the expressions of emotions and objectives – recurring words of praise for the predecessors, respect for the task ahead, humility for the honor, gratitude for the helpfulness, appreciation for the cooperation, and, always, always – HOPE.

I emphatically echo all of these feelings. I am proud. I am honored. I am grateful. And I believe that it is in this essence of continuity that our hope lies – in the ongoing efforts to carry the values of the past into the future.

This year is the 65th anniversary of the Auxiliary in Missouri, and certainly, many changes have come about. We have, however, remained constant as a strong support group for each other, enjoying friendships that are rooted in that special empathy that comes from sharing the history, pride, and tradition of the profession, as well as from understanding the joys and frustrations of day to day life in a medical family. I firmly believe that, if we did nothing else except support and befriend each other, we would justify our existence. But, in fact, we do a great deal more. We have stepped beyond social civilities into social awareness. We have stepped out of the parlor into City Hall. We have taken off the white gloves and rolled up our sleeves.

It takes a special person to work in medical auxiliary – one who can afford to be generous in many ways. The medical spouse carries a heavy burden and a marked responsibility. As communities and agencies and families look to the physicians for the guideline of their health, the spouse is looked to as well. We represent medicine every time we step out the door; we must strive to represent it positively.

And the work is never done. The challenges ahead are foreboding. The work that has been started in the 1980s in adolescent health looms yet as an enormous task as we look to the next decade. Adolescence covers a longer time frame than most of us knew; young people are maturing earlier and yet entering society as meaningful, contributing adults much later. Society is not as kind to kids; it is not as nurturing. In the first place, the economic setting is more difficult to enter. As our society has shifted from an agricultural and industrial economy to a service-oriented economy, there is less opportunity for the uneducated, unskilled young person to make a living and to feel the self-esteem that goes with making a financial contribution to his family and his society. Secondly, the change in the family structure is harder on kids: 20-25% live with only one parent, and the overwhelming majority of these single-parent families is headed by females. The extended family that took up much of the slack in the first half of this century has been eliminated by our mobile society. Kids are alone, isolated. Even in two-parent families, the father is frequently a shadow. Statistics show that many children spend less than 15 minutes a day with their fathers. They don't see them as role models; they don't even have a real concept of what the father does when he goes to

continued on page 266

Auxiliary Message

continued from page 265

work. In addition to a changing economy and a changing family, the third major impact in the adolescent’s life is TV, the window to the adult world for the child. We were eased into the adult world; now kids turn a knob and see it all. And they see it all neatly packaged: the problem, the dilemma, and the solution – all in 30 minutes. It is a distorted view, with distorted consequences: people smoke but don’t get lung cancer; people drink and drive but don’t have car wrecks; people have sex but don’t get pregnant.

The second challenge for medicine and the medical auxiliary, and it’s an ongoing one, is in legislation. Legislative issues as they affect medicine are complex; there are psychological, social, and economic overtones on many issues. Funding is a major problem and it is interrelated. Who could have predicted in the early ’80s that something like the $56 billion needed to bail out savings and loans would affect something like AIDS research today? The federal deficit is moving toward $300 billion; the national debt is on its way to $3 trillion. The interest on the national debt is the third largest item on the federal budget, exceeded only by defense and social security payouts. What is the fourth largest? Health care services. In 1989, $90 billion was paid out for Medicare – $20 billion for Medicaid. And more for federal employees, veterans, etc. It is big business. From the post-war era through the ’70s health care items grew; it was supported enthusiastically. Now the environment is for "cuts."

The problem of the uninsured will not go away; 37 million in the country are uncovered by insurance, and only 50% of those below the poverty level actually qualify for Medicaid. This rallies the cry for a national health insurance or another form of Med-Assist.

Treatment and research for AIDS, with the religious, moral and confidentiality weights it carries with it, is a yet undetermined budget line. No one knows how much it will cost, but we know it will be expensive.

The third challenge is basically fundraising. Medical education and medical research continue to need dollars, and, although the public is generous toward certain health problems – cancer, heart disease, birth defects – the funding for medical education and for research done through medical schools falls on the medical community – alumni, family, friends.

This brings me to my motivational philosophy for this year that incorporates my own philosophy on the areas of concern for medicine, and on the path forward: "Bloom where you’re planted."

We’ve made an excellent start in fundraising. Across the nation last year, almost $2 million was raised by Auxiliary for medical schools, and we hope to top that $2 million mark this year.

The legislative issues are laborious but necessary. The answer is trite, but it is the answer: we have to be alert, informed, and responsive. We have excellent lobbyists on both the state and national level, but they can’t do it alone. We have abundant opportunity to be effective in *public* health issues – as we have been in smoking restrictions, alcohol risk warnings, education in substance abuse, seat belts. Visibility on these issues lends credibility for medicine in dealing on other issues that are more internal or may in the public or congressional view appear to be self-serving.

In the health areas, the problems are even more serious, but not insurmountable. Before the 1920s, many diseases and deaths were remedied by simple hygiene, washing the hands. From 1920-1970 there were tremendous breakthroughs in medicine – antibiotics and vaccines. The public did not have to do anything except show up. Since 1970, many of our health problems have underlying cultural causes, and the cures are social, not medical. The cures lie in lifestyle. The remedy for lung cancer, for example, is not to smoke.

The leading causes of teenage deaths are social issues, and are preventable. Teens die from accidents, homicides, and suicides. Social morbidities. Alcohol plays a role in 50% of auto deaths, in 20% of the homicides, and 10% of the suicides. We’ve learned that a majority of kids have their first drink in sixth to eighth grade. We can address these problems and we have. The most significant headway that is evident is in smoking. In the 1970s, 28% of high school seniors smoked; that is down now below 20%. I’ve focused on the three main areas of health, legislation, and AMA Education and Research Foundation; but, of course, none of these will be possible without a strong membership. The membership award this year is a wall hanging emblematic of the theme – ten wildflowers, representing the ten organized districts in Missouri, brought together in a bouquet, representing the spirit and result of working together, each county auxiliary contributing whatever it can. And remember what I said at the beginning: the support and friendships are the most important.

Bloom where you’re planted and share the bouquet. I offer it as a plea; I hope you will accept it as a challenge.

■

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

*Although your name will **not** be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Dear Dr. Woerth:

We have recently learned that Medicare is requiring the use of ICD-9-CM codes on their claim forms. Could you please explain exactly what this means for the private medical practice?

Dr. S.D

Dear S.D.:

Effective April 1, 1989, Medicare began requiring that all physician offices use ICD-9-CM codes in section 23 of the HCFA 1500 (Medicare) insurance claim to describe the patient's "diagnosis or nature of illness." This change, from allowing verbal descriptions of diagnoses to requiring ICD-9-CM codes, was mandated by the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360). The ICD-9-CM codes for use in physicians' offices are found in Volume 1 and 2 of the International Classification of Disease, Ninth Revision, Clinical Modifications (ICD-9-CM). The following list includes several sources for ordering ICD-9-CM:

1. Health and Human Services, Special Order, ICD-9-CM, 3rd Edition, P.O. Box 360121, Pittsburgh, Pennsylvania 15250-6121
2. Commission of Hospital and Professional Activities, Publications, 1968 Green Rd., Ann Arbor, Michigan 48106
3. St. Anthony Hospital Publications, 801 Pennsylvania Ave. S.E, Washington, D.C. 20003

Along with the requirement of using ICD-9-CM codes, several other significant changes are also being made. Medicare will now accept up to four diagnoses in section 23 of the HCFA 1500 insurance claim form. Medicare will also accept appropriate V codes for a principal diagnosis.

The use of "rule-out, probable, suspected, etc.," as a diagnosis is no longer acceptable. It is recommended that if a definitive diagnosis cannot be made, that the patient's symptoms be coded and, if appropriate, use V codes to further describe screening procedures being used to determine the patient's illness (V73-V82).

Because the ICD-9-CM books were not designed to be self-instructional, it is advised that all who will be coding should participate in an ICD-9-CM coding seminar. There are several excellent companies that provide coding courses and consultants with expertise in coding may also be a source for seminars or individual coding training. ■

Bounds, Poger & O'Donnell will help you reach your destination.

TIMELY ADVICE
KNOWING PHYSICIANS
PRACTICAL SOLUTIONS
INNOVATIVE ALTERNATIVES
PERSONAL ATTENTION

At Bounds, Poger & O'Donnell, we can help you reach your destination with innovative and creative solutions tailored to meet your practice's needs.

It's our business to know your practice. Our goal is to help your practice run on-course and in the right direction.

Our Physician Advisory Group has worked with physicians in solving both personal and practice problems in a variety of areas including practice management, personal financial consulting, third party reimbursement, office automation, tax planning and accounting.

Put our practical, hands-on experience with physicians and our in-depth technical and business experience to work for you.

For a checklist on how to reach your destination, call Jim Bonebrake, of our Physician Advisory Group, at 314-727-1111.

BOUNDS, POGER & O'DONNELL
CERTIFIED PUBLIC ACCOUNTANTS/BUSINESS ADVISORS

120 SOUTH CENTRAL AVE., ST. LOUIS, MISSOURI 63105, (314) 727-1111

GUEST EDITORIAL

by John C. Hagan, III, M.D.

Physical fitness in tomorrowland means the achieving and maintenance of strength, coordination, flexibility, endurance and high aerobic work capability. Unlikely Utopia or potential reality?

Fitness of the Future

Some glorious day in the future every house, apartment and condominium will have a personal exercise room. Society, having learned the benefits of regular exercise, will require these exercise rooms as part of the construction codes. The exercise room will be as important to society as the bedroom, the kitchen and the bathroom.

When Utopia arrives the enlightened denizens of the future will exercise a minimum of three times per week for at least thirty minutes. They will use heart rate monitors attached to earlobe, finger or chest as an index of their physical effort. They will keep their heart rates at 70-85% of their age adjusted maximum rate while exercising.

It will be understood by then that total fitness includes mental, spiritual and physical well-being. A well-equipped exercise room will be considered important to achieving total fitness. Physical fitness in tomorrowland means the achieving and maintenance of strength, coordination, flexibility, endurance and high aerobic work capability.

People will remain physically, mentally and sexually active and with maximum vitality well in their 70s and 80s. Much of what was attributed to aging will be learned to be due to disuse atrophy...

I'm not sure what other people daydream about on the treadmill but this is a recurring fantasy of mine. I also dream of a day when the only health maintenance organizations are exercise clubs.

Twenty-two years of endurance activities including 10Ks, marathons, 100-mile bike rides, triathalons, distance swimming and penning half a dozen articles[1-6] on physical fitness have left me admittedly opinionated about the importance and value of regular exercise. I can even remember when only runners wore shoes with stripes on them and police stopped them to see what they were up to.

From this perspective I wish to suggest that any physician seeking the most time and cost effective exercise program should construct a personal exercise room.

The key element of this room is a top line, motorized treadmill. Go all out and get one with automatic elevation and programmable courses and pacing. The treadmill takes away worries of weather, dogs, potholes, cars and other scourges of the running fraternity. Put a television and a VCR in front of the treadmill. Plan your runs to coincide with a good TV program or sporting event. Watch a movie on the VCR or put on an educational video and get some continuing medical education. Alternatively, turn off the TV and listen to your favorite music. Of the 25,000 miles I figure I've run, those on the treadmill have been the most productive and enjoyable. The treadmill might not rank with the wheel and the scalpel as the most important inventions of man, but it's the most effective exercise device available.

Get one other exercise machine depending on your other interests. Some favorites are stationary cycling machines, rowing machines, cross-country skiing simulators, and stair-climb simulators. Weights are good for muscle tone and strength. Lap swimming is excellent exercise but traveling to and from the pool is time consuming.

What else? Don't trot out the lame excuse that you don't have enough time to exercise. The physicians I

continued on page 270

Guest Editorial

continued from page 269

know who exercise are among the busiest physicians I know. They organize their time and have their priorities set straight. Read Ken Cooper's books[7-10] on aerobic fitness. Have a treadmill stress test if you're over 40 or have a family history of heart disease. Modify your diet reducing saturated fats and adding fiber. Don't smoke. If you drink alcohol do so in moderation. Take time to enjoy your family and some non-medical activities. Both you and your patients will be the better for it. ■

Editor's Note: Dr. Hagan is in the private practice of ophthalmology in North Kansas City, MO. He is a member of the Editorial Board.

References

1. Hagan, JC: Cataracts and the Jogger. *The Jogger* 1976; 35: Jan/Feb.

2. Hagan, JC: Eye and You: An Ophthalmologist's View. *The Jogger* 1981; Jan/Feb.

3. Hagan, JC: Running: A Contact Sport? *Running & Fitness*, 1983; March/April.

4. Hagan, JC: In Defense of Physicians. *Runner's World*, 1984; May.

5. Hagan, JC: Does Running Help Your Eyesight. *Running & Fitness*, 1988; December.

6. Hagan, JC: The Doctor as a Coronary Candidate. *Resident and Staff Physician*, 1974; August.

7. Cooper, KH: *Aerobics.* New York, Bantam; 1968.

8. Cooper, KH: *The Aerobics Way.* New York, M. Evans; 1977.

9. Cooper, KH: *The New Aerobics.* New York, Bantam; 1970.

10. Cooper, KH., and Cooper, MC: *Aerobics for Women*, New York, Bantam; 1973.

Editor's Desk

continued from page 263

working in coordinated action — to be responsible for certain basic aspects of medical practice and for our relationships with our patients. Major areas of concern here include: standard quality of care, the practice of medicine, issues of imbursement, and the relationship of doctors and patients and third parties.

To me, the "doctor" on the phone was "practicing medicine" and his "recommendation" was significant in more than just the economic domain. What does it mean to say a patient is not "sick" enough to be in the hospital? What patients can be safely treated as out-patients? Who speaks for the patients? The sooner we start looking into these areas, the sooner we can spend our time and energy where we can derive more satisfaction in our work — in "caring" for people. ■

Practice Makes Perfect

In Arkansas

Practice opportunities available statewide for qualified physicians. Excellent incentives. For more information, contact Office of **Primary Care, Arkansas Department of Health, 4815 W. Markham, Little Rock, AR 72205-3867. Phone 501/661-2194.**

Correction:

In the April 1989 Editor's Desk, page 203, please note that the British government decided not to fund renal dialysis in patients over the age of 55.

HELPING TO ACHIEVE THE FOUR GOALS[1] OF ANTIHYPERTENSIVE THERAPY...

MARION LABORATORIES
CARDIZEM SR
INTRODUCES

NEW

CARDIZEM® SR

(diltiazem HCl) sustained release capsules

For hypertension

Controls blood pressure[2-6]

Maintains well-being[2-6]

Helps prevent end-organ complications[7,8]

Helps reduce cardiovascular risks[2,5,9]

90 mg SR bid

0930A9

Please see brief summary of prescribing information on next page.

NEW

CARDIZEM® SR

(diltiazem HCl) sustained release capsules

For hypertension

CARDIZEM SR

EFFECTIVE MONOTHERAPY WITH HIGH PATIENT ACCEPTANCE

Starting Dosage:

Cardizem SR
90 mg

90 mg bid*

Also Available:
120-mg capsules

*Dosage must be adjusted to each patient's needs, starting with 60 to 120 mg twice daily.

BRIEF SUMMARY
CARDIZEM® SR
(diltiazem hydrochloride)
Sustained Release Capsules

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, (3) patients with hypotension (less than 90 mm Hg systolic), (4) patients who have demonstrated hypersensitivity to the drug, and (5) patients with acute myocardial infarction and pulmonary congestion documented by x-ray on admission.

WARNINGS

1. **Cardiac Conduction**. CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (nine of 2,111 patients or 0.43%) Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure**. Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). An acute study of oral diltiazem in patients with impaired ventricular function (ejection fraction 24% ± 6%) showed improvement in indices of ventricular function without significant decrease in contractile function (dp/dt) Experience with the use of CARDIZEM (diltiazem hydrochloride) in combination with beta-blockers in patients with impaired ventricular function is limited Caution should be exercised when using this combination.
3. **Hypotension**. Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury**. Mild elevations of transaminases with and without concomitant elevation in alkaline phosphatase and bilirubin have been observed in clinical studies Such elevations were usually transient and frequently resolved even with continued diltiazem treatment In rare instances, significant elevations in enzymes such as alkaline phosphatase, LDH, SGOT, SGPT, and other phenomena consistent with acute hepatic injury have been noted These reactions tended to occur early after therapy initiation (1 to 8 weeks) and have been reversible upon discontinuation of drug therapy The relationship to CARDIZEM is uncertain in some cases, but probable in some (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing

Dermatological events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported. Should a dermatologic reaction persist, the drug should be discontinued.

Drug Interaction. Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction. (See WARNINGS.) Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes biotransformation by cytochrome P-450 mixed function oxidase Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Dosages of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment, may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

Beta-blockers: Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated, but available data are not sufficient to predict the effects of concomitant treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted (See WARNINGS.)

Cimetidine: A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a 1-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day Ranitidine produced smaller, nonsignificant increases The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine An adjustment in the diltiazem dose may be warranted

Digitalis: Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20%. Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization (See WARNINGS.)

Anesthetics: The depression of cardiac contractility, conductivity, and automaticity as well as the vascular dilation associated with anesthetics may be potentiated by calcium channel blockers. When used concomitantly, anesthetics and calcium blockers should be titrated carefully

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C Reproduction studies have been conducted in mice, rats, and rabbits Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers. Diltiazem is excreted in human milk One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted

Pediatric Use. Safety and effectiveness in children have not been established

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded from these studies.

The adverse events described below represent events observed in clinical studies of hypertensive patients receiving either CARDIZEM Tablets or CARDIZEM SR Capsules as well as experiences observed in studies of angina and during marketing The most common events in hypertension studies are shown in a table with rates in placebo patients shown for comparison Less common events are listed by body system, these include any adverse reactions seen in angina studies that were not observed in hypertension studies In all hypertensive patients studied (over 900), the most common adverse events were edema (9%), headache (8%), dizziness (6%), asthenia (5%), sinus bradycardia (3%), flushing (3%), and 1° AV block (3%). Only edema and perhaps bradycardia and dizziness were dose related The most common events observed in clinical studies (over 2,100 patients) of angina patients and hypertensive patients receiving CARDIZEM Tablets or CARDIZEM SR Capsules were (ie, greater than 1%) edema (5.4%), headache (4.5%), dizziness (3.4%), asthenia (2.8%), first-degree AV block (1.8%), flushing (1.7%), nausea (1.6%), bradycardia (1.5%), and rash (1.5%).

DOUBLE BLIND PLACEBO CONTROLLED HYPERTENSION TRIALS

Adverse	Diltiazem N=315 # pts (%)	Placebo N=211 # pts (%)
headache	38 (12%)	17 (8%)
AV block first degree	24 (7.6%)	4 (1.9%)
dizziness	22 (7%)	6 (2.8%)
edema	19 (6%)	2 (0.9%)
bradycardia	19 (6%)	3 (1.4%)
ECG abnormality	13 (4.1%)	3 (1.4%)
asthenia	10 (3.2%)	1 (0.5%)
constipation	5 (1.6%)	2 (0.9%)
dyspepsia	4 (1.3%)	1 (0.5%)
nausea	4 (1.3%)	2 (0.9%)
palpitations	4 (1.3%)	2 (0.9%)
polyuria	4 (1.3%)	2 (0.9%)
somnolence	4 (1.3%)	—
alk phos increase	3 (1%)	1 (0.5%)
hypotension	3 (1%)	1 (0.5%)
insomnia	3 (1%)	1 (0.5%)
rash	3 (1%)	1 (0.5%)
AV block second degree	2 (0.6%)	—

In addition, the following events were reported infrequently (less than 1%) o have been observed in angina trials. In many cases, the relation to drug is uncertain.

Cardiovascular:	Angina, arrhythmia, bundle branch block, tachycardia, ventricular extrasystoles, congestive heart failure, syncope
Nervous System:	Amnesia, depression, gait abnormality, hallucinations, nervousness, paresthesia, personality change, tinnitus, tremor, abnormal dreams
Gastrointestinal:	Anorexia, diarrhea, dysgeusia, mild elevations of SGOT, SGPT and LDH (see hepatic warnings), vomiting, weight increase, thirst
Dermatological:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, CPK increase, dyspnea, epistaxis, eye irritation, hyperglycemia, sexual difficulties, nasal congestion, nocturia, osteoarticular pain, impotence, dry mouth.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM. alopecia, gingival hyperplasia, erythema multiforme, and leukopenia Definitive cause and effect relationship between these events and CARDIZEM therapy cannot yet be established.

Issued 1/89

References: 1. Staessen J, Fagard R, Lignen P, et al: *Pract Cardiol* 1986;12(5):55-65. **2.** Massie B, MacCarthy EP, Ramanathan KB, et al: *Ann Intern Med* 1987;107(2):150-157. **3.** Weir MR, Josselson J, Giard MJ, et al: *Am J Cardiol* 1987;60:36I-41I. **4.** Frishman WH, Zawada ET Jr, Smith LK, et al: *Am J Cardiol* 1987;59:615-623. **5.** Pool PE, Seagren SC, Salel AF: *Am J Cardiol* 1985;56:86H-91H. **6.** Pool PE, Seagren SC, Salel AF: *Cardiol Board Rev* 1986;3(10):77-91. **7.** Sunderrajan S, Reams G, Bauer JH: *Hypertension* 1986;8:238-242. **8.** Amodeo C, Kobrin I, Ventura HO, et al: *Circulation* 1986;73(1):108-113. **9.** Schulte K-L, Meyer-Sabellek WA, Haertenberger A, et al: *Hypertension* 1986;8:859-865.

Another patient benefit product from

M
PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

CSRAD706
0930A9

Bronchopulmonary Sequestration

Carson Agee, M.D., Joseph T. Walls, M.D.,Jack J. Curtis, M.D. and Zuhdi Lababidi, M.D.

Columbia, Missouri

Bronchopulmonary sequestration is an area of lung parenchyma that is devoid of normal connection to the trachebronchial tree. Arterial supply is from an aberrant systemic artery, usually a branch of the aorta. There are two broad types of bronchopulmonary sequestration: intralobar and extralobar. The former shares a common pleura with the lung while the latter is separated by its own pleura. Definitive therapy requires pulmonary resection.

Bronchopulmonary sequestration is an area of lung parenchyma that lacks normal connection to the tracheobronchial tree. It is a rare, non-hereditary lesion comprising approximately 6.4% of all congenital pulmonary anomalies.[1] The lesion is fed by an aberrant systemic artery, usually a branch of the aorta.

There are two types of bronchopulmonary sequestration: intralobar and extralobar. Intralobar sequestration, which shares a common pleura with the lung, is usually located in the lower lobe. Left lung involvement has been reported more frequently than the right lung, but one study notes a nearly equal bilateral distribution.[2] Intralobar bronchopulmonary sequestration is usually (96% frequency) drained by pulmonary veins.[1]

Extralobar sequestration, which is separated by its own pleura, is predominantly found posteriorly between the left lower lobe and the diaphragm. It has a 50% association with other congenital anomalies,[3] most commonly diaphragmatic hernia[1], and venous drainage is usually via the systemic venous system (azygos, hemiazygos or inferior vena cava), although 20%-25% may be drained by pulmonary veins.[2]

Neither intralobar nor extralobar bronchopulmonary sequestrations have normal bronchial connections, and both types are supplied by systemic arteries, usually branches of the thoracic or abdominal aorta.

The etiology of pulmonary sequestration has been the subject of a long and continued debate in the literature. Stocker[2] and Gdanietz[4] have reviewed the subject. Most etiologic theories cite as the cause, either bronchopulmonary foregut malformations, abnormal arterial blood supply, or isolation of a bronchopulmonary segment by traction from an aberrant systemic artery. Stocker proposed that extralobar bronchopulmonary sequestration is congenital, because of the high incidence of associated anomalies. He postulated that intralobar sequestration is the result of chronic or repeated pulmonary infection, resulting in isolation of lung parenchyma from the normal bronchial tree. Complete or partial interruption of the pulmonary arterial blood

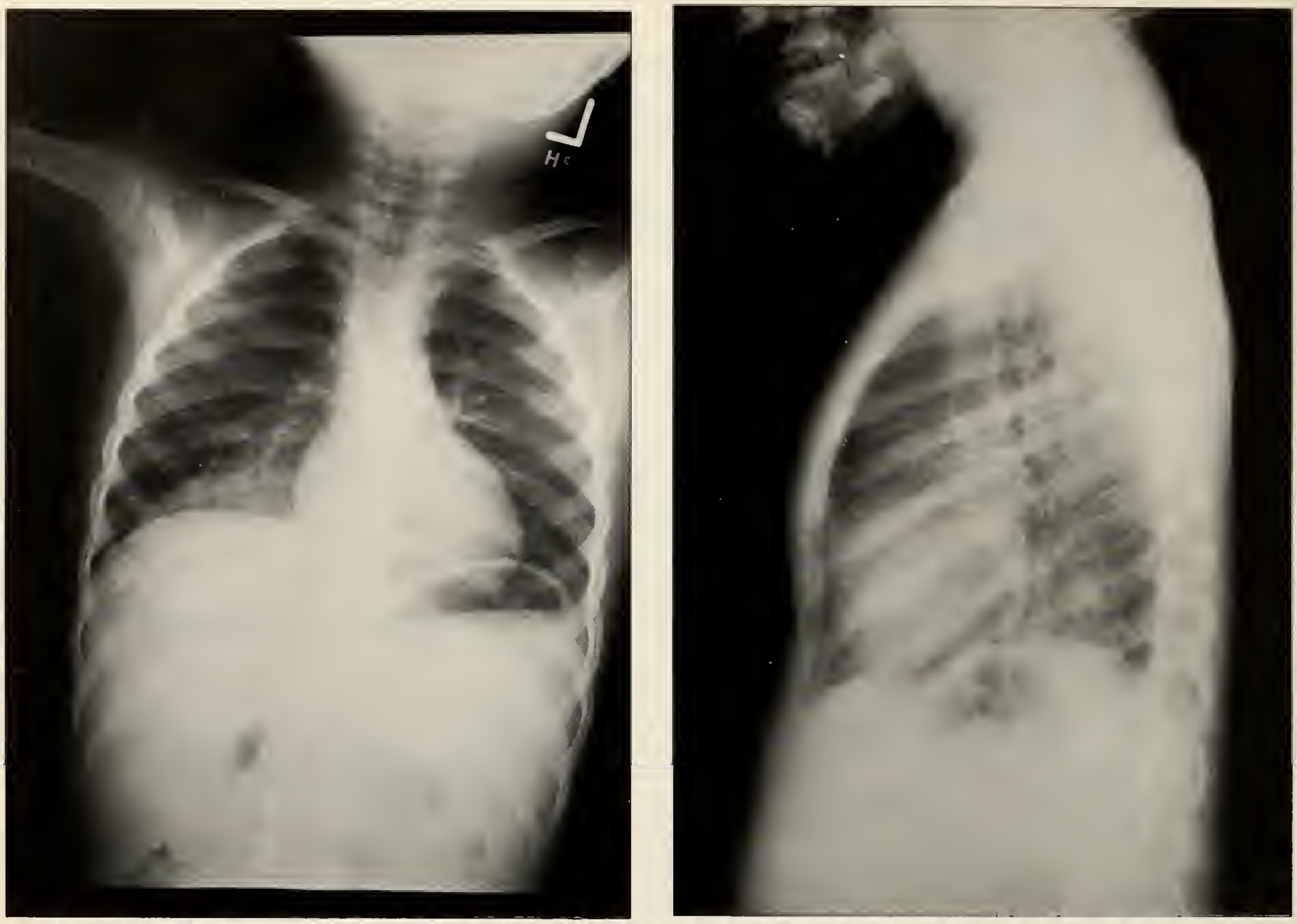


Fig 1A and 1B. Posterior-anterior and lateral chest roetgenograms indicating a large hazy density in the right lower lobe of lung.

supply then occurs, with "parasitization" of a systemic artery in the pulmonary ligament, causing intralobar sequestration.[2] Durnin and Lababidi et al reported the case of a seven-day-old baby with bronchopulmonary sequestration, supporting the theory that the intralobar variety is also a developmental abnormality.[5]

In addition to physical examination and routine laboratory studies and chest x-ray film for comparison with previous chest x-ray films, bronchoscopy is indicated to rule out foreign body obstruction. Computed axial tomographic scan of the chest, and magnetic resonance imaging are also indicated.

In the past, preoperative aortography was considered advisable because early experience with the surgical removal of pulmonary sequestration was occasionally associated with massive hemorrhage from injury to the anomalous systemic arteries. There is controversy in the literature over the need for preoperative aortography. Some authors suggest the procedure is essential due to the variability in location (thoracic aorta, abdominal aorta, other systemic arteries), size (1 mm to 15 mm), and number of systemic arteries that may be encountered during the resection (20% of cases involve multiple arteries).[1,3,4,6,7] Gdanietz[4] and others[8] have reported their operative experiences, in which the sequestration was an incidental or unsuspected finding, and resection was accomplished without either technical difficulty or benefit of preoperative arteriography.

There is now enthusiasm for the use of magnetic resonance imaging to evaluate suspected pulmonary sequestrations. Good definition of the lesion and its arterial blood supply has been reported.[9,10]

It is agreed that definitive therapy of pulmonary sequestration is removal by thoracotomy soon after diagnosis is made due to the propensity for infection and also to rule out a neoplastic process. A relatively classic case of intrapulmonary sequestration in a child emphasizes the diagnostic and therapeutic principles.

Case report

A 3-year-old white boy was referred to the Univeristy of Missouri Columbia Health Sciences Center with a presumptive diagnosis of foreign body aspiration pneu-

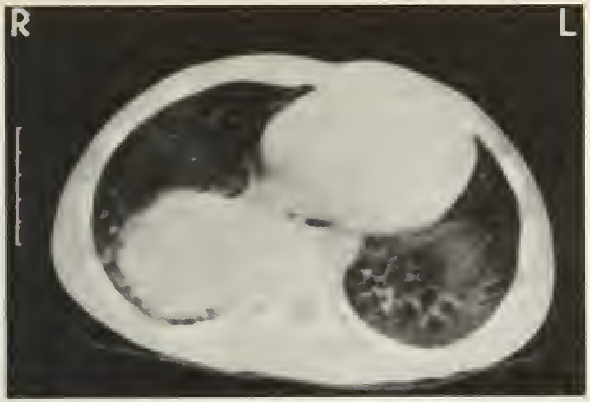


Fig 2. Computed axial tomography of the chest with contrast indicating an irregular 6 cm mass lesion in the right lower lobe posteriorly.

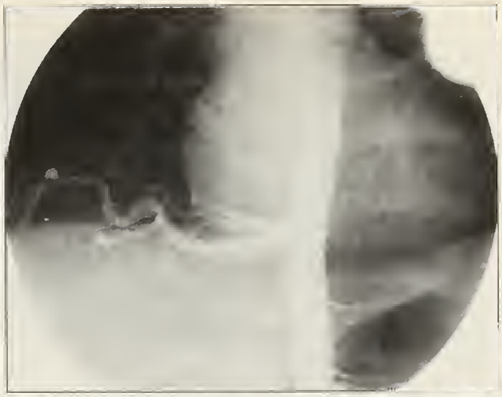


Fig 3. Aortogram revealing systemic arterial branches from thoracic aorta supplying right lower lobe of lung.

monia. One month previously, he had the acute onset of fever, cough, pallor and vomiting. No history of aspiration was relayed. He had been treated with three successive antibiotics, resulting in improvement but not resolution of his symptoms. At the time of admission he was reported to have a decreased appetite and energy level and a persistent cough. He had been afebrile for more than one week.

The patient had a similar episode at four months of age. A chest roentgenogram at that time revealed right lower lobe pneumonia. Bronchoscopy revealed pus in the right mainstem bronchus. No foreign body was noted. He improved on antibiotic therapy and pulmonary physiotherapy and was discharged with no further problems until 36 months later. Other than the pulmonary infection, his medical history was unremarkable. Perinatal and developmental history were normal. The patient had no allergies and was not taking any medications at the time of admission. Maternal and paternal family history was positive for severe asthma. An 18-month-old sibling was healthy. Physical exam revealed pulse 80/minute, respiration 20/minute, BP 97/57, temperature 36.9°C. Overall, the patient was an active, alert 3-year-old in no apparent distress. Physical exam was unremarkable except for decreased right lower lobe breath sounds and rhonchi. There was no extremity clubbing, cyanosis or edema. The thorax had a normal symmetric shape.

Laboratory test results included the following: WBC 13,600/mm^3, differential: 39% polymorpholeukocytes, 3% bands, 50% lymphocytes, 5% monocytes, HGB 12.8 mg/dl, HCT 38%. Electrolytes and creatinine were within normal limits.

Chest roentgenogram (Fig 1 A & B) revealed a hazy infiltrate in the right lower lobe posteriorly; the cardiac silhouette was normal and diaphragm borders were sharp. Fluoroscopy of the chest revealed a large, irregular opacity in the right lower lobe and normal diaphragmatic motion. Computed axial tomography of the chest, with contrast, revealed an irregular 6 cm mass in the right lower lobe posteriorly (Fig 2). The lesion abutted the mediastinum and right hemidiaphragm. There was no evidence of air bronchogram, abnormal blood vessels, or contrast enhancement. Bronchoscopy did not reveal a foreign body or other abnormality. An arteriogram demonstrated an abnormal artery arising from the lower thoracic aorta and dividing into three branches to supply the right lower lobe (Fig 3). Diagnosis of pulmonary sequestration was made.

The patient underwent an operation to resect the right lower lobe sequestration without complications. Three systemic arteries (2-3 mm in diameter) that branched from the aorta were found traversing the inferior pulmonary ligament. Venous drainage was to the right inferior pulmonary vein.

Pathologic examination confirmed the diagnosis of intrapulmonary type bronchopulmonary sequestration (Fig 4). Histologically, there was obliteration of normal bronchopulmonary morphology with numerous mucus-filled cysts measuring up to 0.8 cm in diameter. Fibrosis, focally dense mononuclear infiltrate and scattered neutrophils were seen. Patchy areas of alveoli, some of which were cystic, and large focal patches of foamy histiocytes were present.

The patient recovered with no untoward incident and was discharged on the fifth postoperative day. Follow-up one month postoperatively revealed the patient had recovered well without complications.

Discussion

This patient had characteristic symptoms of pulmonary infection. In Savic's report, the commonest symptoms were cough, expectoration, and recurrent pneumonia, which usually increased in severity over time.[1] Clinical suspicion of pulmonary sequestration was high because the patient was an otherwise healthy young child who had had pneumonia twice in the same

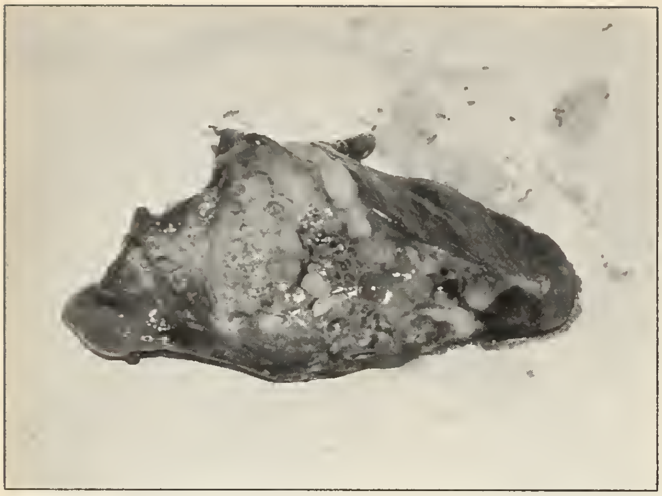


Fig. 4. Sequestration of right lower lobe of lung with obliteration of normal bronchopulmonary morphology. Numerous mucus-filled cysts measuring up to 0.8 cm in diameter were present. Microscopic examination revealed patchy areas of alveoli with foamy histiocytes, scattered areas of neutrophils and focally dense mononuclear infiltrates.

anatomic location without evidence of foreign body aspiration or other illness. Initial differential diagnosis included: resolving pneumonia with a post-pneumonic loculated effusion, infection within a sequestrated lung segment, diaphragmatic herniation, or neoplastic lesion. A CT scan revealed a nonspecific mass in the right lower lung consistent with pulmonary sequestration, but did not rule out pneumonia.

Foreign body aspiration pneumonia was a possibility in a child of this age. However, bronchoscopy yielded no abnormal findings, thus reducing the probability that this illness was being caused by aspiration of a foreign body. Bronchoscopy has been reported to be of little value in establishing the diagnosis of pulmonary sequestration.[3] We believe it is indicated to rule out a foreign body or other obstructive process.

In order to confirm the diagnosis of pulmonary sequestration and identify the vascular anatomy, aortography was performed. In retrospect a safe, successful operation could have been possible without this information. The possibility of aberrant blood supply in the inferior pulmonary ligament when inflammatory adhesions are present makes cautious dissection necessary. The current literature indicates that with an appropriate amount of pre-operative suspicion and intraoperative care, these lesions can be safely resected without arteriogram.[4,8] Preoperative magnetic resonance imaging (MRI) may be beneficial in demonstrating the vascular anatomy non-invasively. A few case reports hint at the efficacy of MRI evaluation of pulmonary sequestration; however, there are no large studies that establish the sensitivity of MRI in the disease's diagnosis.[9,10]

Recent reports support the tenet that early resection is the treatment of choice. Non-operated lesions continue to be infected. Resection of intrapulmonary sequestration requires lobectomy in 71.5% of cases.[1] Operative death, almost invariably from bleeding during the early history of pulmonary resection for the disease, is now rare. Savic reported five of seven deaths were from bleeding in 400 cases.[1] In the more recent literature mortality is even lower.[4,6] Children without other serious anomalies or illness tolerate the procedure well. The involved lung is non-functioning. Following resection, Westley[6] reports a return of normal pulmonary function tests as early as four to 15 months postoperatively. A good long-term result can be expected from surgical therapy.

References

1. Savic B, Birtel FV, Tholen W, et al: Lung sequestration: report of seven cases and review of 540 published cases. *Thorax* 1979;34:96-101.r
2. Stocker, TJ: Sequestrations of the lung. *Seminars in Diagnostic Pathology* 1986;3(2):106-121.
3. Collin PP, Des Jardins JG, Khan AH: Pulmonary Sequestration. *Journal of Pediatric Surgery* 1987;22(8):750-753.
4. Gdanietz K, Vorpahl K, Piehl G, et al: Clinical symptoms and therapy of lung separation. *Progress in Pediatric Surgery* 1987;21:86-97.
5. Durnin RE, Lababidi Z, Butler C, et al: Bronchopulmonary sequestration. *Chest* 1970;57(5); 454-459.
6. Wesley JR, Heidelberger KP, DiPetro MA, et al: Diagnosis and management of congenital cystic disease of the lung in children. *Journal of Pediatric Surgery* 1986;21 (3):02-207.
7. Hoeffel JC, Bernard C, Didier E, et al: Pulmonary Sequestrations of the upper lobe in children: Three Presentations. *ROFO* 1986;144 (5):542-545.
8. Leijala M, Louhimo I: Extralobar sequestration of the lung in children. *Progress in Pediatric Surgery* 1987;21:98-106.
9. Naidich, DP, Rumancik WM, Lefleur RS, et al: Intra lobar pulmonary sequestration: MR evaluation. *Journal of Computer Assisted Tomography* 1987;11(3): 531-533.
10. Oliphant L, McFadden RG, Carr TV, et al: Magnetic resonance imaging to diagnose intralobar pulmonary sequestration. *Chest* 1987;91 (4): 500-502.

The Authors

CARSON AGEE, M.D.
JOSEPH T. WALLS, M.D.
JACK J. CURTIS, M.D.
ZUHDI LABABIDI, M.D.

The authors are affiliated with the University of Missouri Health Sciences Center where Dr. Agee is a resident in general surgery. Dr. Walls is an associate professor of cardiothoracic surgery as is Dr. Curtis who is also chief of that division. Dr. Lababidi is professor and director of pediatric cardiology.

Reprints

Joseph T. Walls, M.D.
Division of Cardiothoracic Surgery
University of Missouri Health Sciences Center
1 Hospital Drive
Columbia, MO 65212

Prolonged Spontaneous Remission of Case of Malignant Lymphoma

Jack W. Wolf, M.D.
Kansas City, MO

A case is reported of malignant lymphoma which appeared in eight different locations during seven years following initial diagnosis, and subsequently has been followed by 22 years of complete remission. The literature on regressions or remissions of malignant lymphomas is reviewed, and various implications of the present case are discussed.

Spontaneous remission or regression of malignant disease in humans is known to occur but is unusual.[1,2] Spontaneous remission or regression of human solid tumor is extremely rare. Spontaneous remission or regression of hematological malignancies is less rare, although still uncommon. Such remissions have most often been seen in acute leukemias of childhood, mostly in acute lymphatic leukemia. Remissions are usually preceded by severe pyogenic or viral infections and generally are of relatively short duration — a few months, for example, after which relapse and death occur.

There are reports of remissions in chronic lymphocytic leukemia that were of longer duration, measured in years, and often appeared to have been associated with the development of a second malignancy, such as a carcinoma. There are also reports of rare spontaneous remissions in malignant lymphomas and plasma cell dyscrasias that, on several occasions, followed severe viral infections such as hepatitis and tended to be prolonged.[1,2]

I report the case of a woman whose lymphoma manifested itself in eight different sites over seven years' time, from 1959 to 1966, then went into a prolonged and complete remission that has lasted 22 years. This case is notable because of the length of the remission, which continues, and because the patient has been under the author's care continuously since shortly after the initial diagnosis was made.

Case Report

A 56-year-old woman was admitted to the Washington Hospital Center, Washington, D.C., in May 1959 after she noted a lump in her left axilla a few days earlier. She had previously been in excellent health. The lump was removed surgically, and the pathologic diagnosis was "lymphosarcoma." There were no other abnormalities on physical examination, but a focus of malignant lymphoma was noted on examination of the bone marrow. After recovery from the surgery, she received a course of radiation therapy to the lymph node-bearing area of the left axilla.

Having received an ominous prognosis, the patient decided to leave Washington, D.C., and return to Kansas City, Mo., her original home, and where she still had five older sisters living. She felt that she was coming home to die.

The patient consulted me on September 15, 1959. I had examined her once previously in 1951, when she was found to have mild hypertension, but was otherwise in good health. At this visit, her examination was entirely negative except for a blood pressure of 180/90. She was scheduled for monthly check-ups because of her diagnosis of lymphoma.

The patient's examination results continued to be normal except for mild hypertension until January 1961, when a right inguinal gland became enlarged and was resected. The pathological report follows:

Gross. The specimen consists of a spherical lymph node which measures 3.0 x 2.0 x 2.0 cm. It is rather firm. Cut sections reveal that the usual architecture is not present and appears to be replaced by a bulging, rather homogenous glistening, fleshy appearing tissue.

Microscopic. Lymph node is very cellular. Nodal architecture diffusely effaced. Capsule thin and neither it nor perinodal fat is infiltrated. The node is diffusely replaced by small to medium sized and occasionally large cells with rounded to ovoid nuclei, relatively small amounts of cytoplasm, indistinct cell outlines, abundant mitoses. The cell type is relatively uniform.

Diagnosis. Malignant lymphoma, predominantly poorly differentiated lymphocytic, lymph node right groin.[3]

Postoperatively, a course of localized radiation therapy was given to the right groin area.

In June 1961, after having experienced a stubborn left middle ear infection for about two weeks, a small mass was observed in the left posterior pharynx, which apparently obstructed the eustachian tube. A biopsy was performed, and the diagnosis was malignant lymphoma. The patient received a course of 20 radiation treatments to the eustachian tube area. The ear infection subsided, and the mass disappeared.

In November 1961, enlargement of a right epitrochlear lymph node was noted. This was excised November 28, 1961. Pathological examination again revealed malignant lymphoma. A course of 10 radiation treatments was given to the local area.

On February 11, 1962, enlargement of a gland in the right axilla to the size of a large olive was noted. Because the pathologic diagnosis of malignant lymphoma had by now been made on four occasions, it was decided to forego excision of the enlarged gland and begin a course of 10 radiation treatments to the local area. The gland disappeared.

On July 6, 1962, a left epitrochlear node, enlarged to the size of a small olive, was noted. Again a course of 10 local radiation treatments was given, without excising the gland. The enlarged gland disappeared.

On March 31, 1966, an olive-sized gland was noted in the left inguinal area. A course of local radiation therapy was given, and the enlarged gland disappeared.

In early May of 1966, the patient began to complain of severe pain down the left arm, and on May 10, the typical eruptions of herpes zoster were noted over her left shoulder and upper arm. On May 17, the eruption became somewhat generalized, with about a dozen scattered lesions on the right side of her face and trunk. Prostaphlin therapy was started, and a few days later, the lesions began to recede and dry up, and gradually disappeared.

On July 22, 1966, a swelling of the left sternomastoid muscle was noted. Examination indicated the enlargement was due to a gland the size of a large olive under the lower part of the muscle. A course of 10 radiation treatments to the local area was given, and the gland and swelling disappeared.

On October 21, 1969, the patient again had typical lesions of herpes zoster in the right lumbar area. The lesions receded without complications after treatment with injections of 2 mL of *medroxyprogesterone.*

The patient continued to be seen at intervals of about three months. She had no further troubles until June 1981, when she had her third attack of herpes zoster, this time over her right scapular area. Prostaphlin was again prescribed. Despite considerable pain, the lesions improved quickly, and the pain gradually disappeared.

There have been no further developments of malignant lymphoma in this patient since 1966, and at the time of this writing, she appears to be in excellent health. She is now 85 years old and is able with only part-time assistance to manage the household of the two-story home in which she and two sisters live. One sister is 100 years old in good health except for a severe crippling arthritis of one ankle, and the other only 89, but totally disabled from heart disease. All three are entirely alert and lucid.

Whether this patient's prolonged remission is spontaneous or in response to therapy may be argued. The only therapy was excision of four lesions followed by local radiation therapy and local radiation therapy without excision to four additional lesions. No generalized radiation therapy and no chemotherapy was given at any time. In my opinion, this does not constitute therapy for a systemic disease, and I believe this was a truly spontaneous remission.

The three episodes of herpes zoster are another unusual feature of this case. While herpes zoster is a common complication of malignant lymphoma and other malignancies, suggesting poor disease resistance, three separate episodes in one patient is quite unusual.

The first episode was the most severe, with additional lesions appearing on the right side after the initial eruption on the left. The two subsequent episodes were each milder than the previous attack. I wondered if this demonstrated improving resistance and also whether the episodes of herpes zoster could have in some way been responsible for the patient's remission of malignant lymphoma. Acute viral or bacterial infections have been cited in the past as responsible for regression of hematologic malignancies.[1] And even if the presence of malignant lymphoma is in some way responsible for the occurrence of herpes zoster, paradoxically, the viral infection of herpes zoster could be responsible for the remission of the malignant lymphoma.

A case such as this indicates that the prognosis of malignant lymphoma may not always be so bad as generally pictured, that systemic treatment may not always be necessary, and that the treatment should not be so intensive as to injure the patient more than the disease itself.[4,5]

References

1.Wiernid PH: Spontaneous regression of hematologic cancers. *Natl Cancer Inst Monogr* 1976;44:35.

2.Krikorian JG, Portlock CS, Cooney DP, et al: Spontaneous regression of non-Hodgkins lymphoma. *Cancer* 1980;46:2093.

3.Fisher RI, Hubbard SM, DeVita NT, et al: Factors predicting long-term survival in diffuse mixed, histiocytic, or undifferentiated lymphoma. *Blood* 1981;58:45.

4.Jaffe ES: Guest editorial: Follicular lymphomas: Possibility that they are benign tumors of the lymphoid system. *JNCI* 1983;70:401.

5.Horning SJ, Rosenberg SA: The natural history of initially untreated low-grade non-Hodgkin's lymphomas. *N Engl J Med* 1984;311:1471.

The Author

JACK W. WOLF, M.D.

Dr. Wolf is a clinical professor of medicine at the University of Kansas Medical Center, Kansas City, Kansas.

Reprints

Jack W. Wolf, M.D.
6125 Morningside Drive
Kansas City, Missouri 64113

Large Cell Lymphoma Presenting As A Coronal Penile Lesion

Graham C. Scott, M.D.,
Columbia, Missouri

Peter C. Ungaro, M.D., John Cashman, M.D., and Jorge J. Gonzalez, M.D.
Wilmington, North Carolina

Although the majority of penile malignancies are primary epithelial carcinomas, consideration of secondary involvement, especially from lymphoma, is important, since there are alternatives to the standard therapeutic approach of penile amputation.

Primary malignancies of the penis are most commonly epithelial. Despite a rich vascular and lymphatic supply, metastatic carcinoma of the penis is rare.[1] Penile involvement by lymphoma is unusual, and has been reported infrequently.[2,3] Stewart et al[3] described in 1985 what they considered to be the sixth and seventh reported cases of lymphoma of the penis. We report a case of lymphomatous involvement of the penis in the form of a coronal lesion, superficially appearing to be an epithelial malignancy.

Case Report

The patient was an 88-year-old white man who had a coronal penile mass. He had a long history of dementia, and had lived alone for many years. He had no complaints other than his penile mass. His medical history was unremarkable. Physical examination revealed a brownish-red, cauliflower-shaped lesion at the tip of the glans measuring 3.7 x 2.4 cm (Fig 1). A condyloma of the foreskin was also noted. A hard mass, approximately 4 x 5 cm, was palpated in the right testicle. In addition, there was a 0.5 x 2 cm erythematous plaque over the left femoral triangle. Preoperative evaluation included a complete blood count, with normal results. The only abnormality noted in laboratory tests was an elevated alkaline phosphatase of 144 mU/mL (normal 30-110 mU/mL). Chest x-ray showed a right suprahilar granuloma, which was unchanged from a film obtained three years previously. An intravenous pyelogram showed normal dye excretion without evidence of urethral or bladder abnormality.

The patient underwent a partial penectomy and a right orchiectomy with excision of the cord to the external inginal ring. A punch biopsy of the skin lesion was also obtained. Pathologic examination showed a proliferation of malignant cells characterized by moderately large pleomorphic nuclei, small nucleoli and an open chromatin pattern. Mitotic activity was prominent (Fig 2). The same pattern was also observed in the testis and skin. A diagnosis of large cell lymphoma was made. Additional evaluation included normal bone marrow aspirate and biopsy. Computed tomography of the abdomen failed to show any adenopathy or masses. Radiation therapy to the sites of neoplastic involvement was initiated.

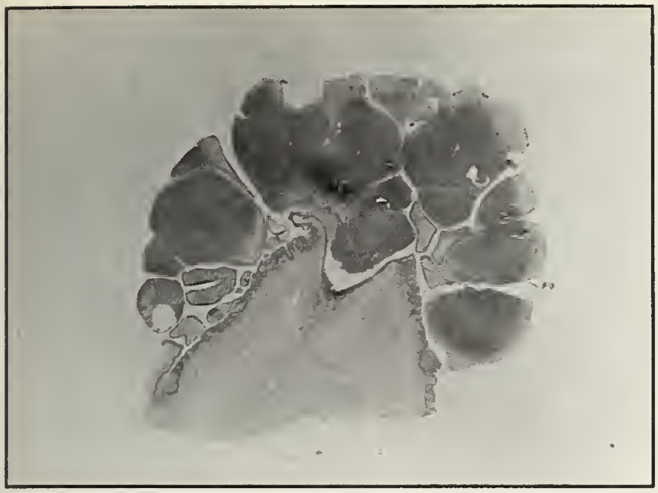


Fig. 1. Lesion of glans penis (hematoxylin-eosin stain, original magnification x 10).

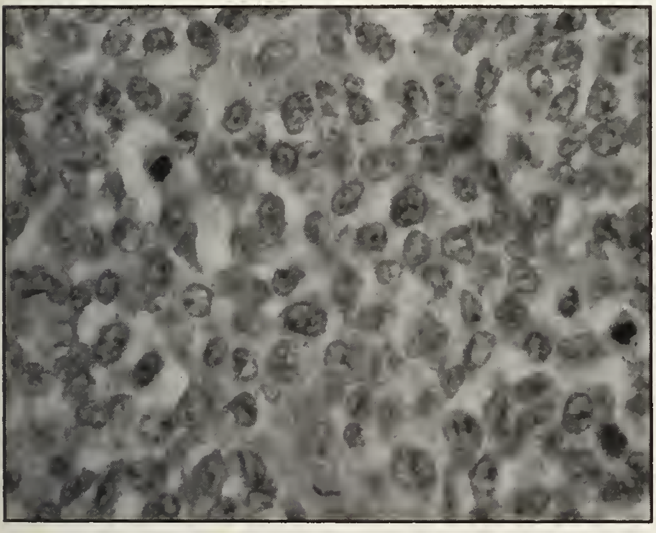


Fig. 2. Cellular detail of lymphoma (hematoxylin-eosin stain, original magnification x 50).

Discussion

Non-Hodgkin's lymphoma frequently presents in extranodal sites, the most common being the gastrointestinal tract. Lymphomas of the penis, however, are rare and it is reasonable to assume that the majority of them represent a secondary involvement of the penis.[2] In the case presented here, it is likely that the lymphoma originated in the testis. Skin involvement has been well recognized in previous cases of testicular lymphomas.[4,5] The presence of a potentially lymphomatous genital skin lesion should prompt a search for a testicular mass. Because the great majority of penile malignancies are primary epithelial carcinomas, partial or total penectomy is used routinely in the therapy of penile tumors. This has also been the therapeutic approach in some of the previously reported cases of penile lymphoma,[2] as well as in the patient presented here. It should be kept in mind, however, that lymphoma of the penis in the majority of cases is associated with other sites of involvement. Although surgical treatment sometimes constitutes effective management for local lymphomas, this is not usually the case.[6] Local control can almost always be achieved with radiotherapy, and chemotherapy is appropriate if the disease is disseminated. If penile lesions behave similarly to lesions at other sites, then surgery might be most appropriately limited to biopsy for diagnostic purposes. Certainly such an approach should be considered in the patient with a testicular mass in association with a penile neoplasm.

References

1. Narayana AS, Loening SA, Olney L, et al: Metastatic tumors of the penis. *Eur Urol* 1979;5:262-264.
2. Gonzalez-Campora R, Nogales FF Jr, Lema E, et al: Lymphoma of the penis. *J Urol* 1981;126:270-271.
3. Stewart AL, Grieve RJ, Banerjee SS: Primary lymphoma of the penis. *Europ J Surg Oncology* 1985;11:179-181.
4. Altman J, Winkelmann RK: Lymphosarcoma of the skin and testis. *Arch Dermatol* 1960;82:943-947.
5. Doll DC, Weiss RB: Malignant lymphoma of the testis. *Am J Med* 1986;81:515-524.
6. Berard CW, Greene MH, Jaffe ES, et al: A multidisciplinary approach to non-Hodgkin's lymphomas. *Ann Intern Med* 1981;94:228-235.

The Authors

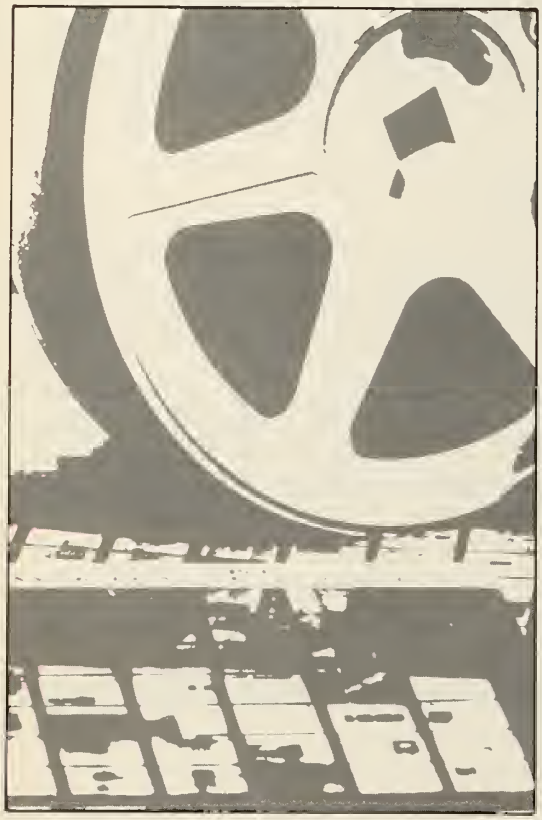
GRAHAM C. SCOTT, M.D.
PETER C. UNGARO, M.D.
JOHN CASHMAN, M.D.
JORGE J. GONZALEZ, M.D.

Dr. Scott is with the University of Missouri School of Medicine Division of Pulmonary, Critical Care, and Environmental Medicine,, Columbia. Drs. Ungaro, Cashman and Gonzalez are from the University of North Carolina School of Medicine, Department of Urology, New Hanover Memorial Hospital, Wilmington.

Reprints

Graham C. Scott, M.D.
Department of Medicine
Division of Pulmonary, Critical Care and Environmental Medicine
University of Missouri School of Medicine
1 Hospital Drive
Columbia, Missouri 65212

This Publication is available in Microform.



University Microfilms International

Please send additional information
for ______________________
(name of publication)
Name______________________
Institution______________________
Street______________________
City______________________
State__________ Zip__________

300 North Zeeb Road
Dept. P.R.
Ann Arbor, Mi. 48106

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

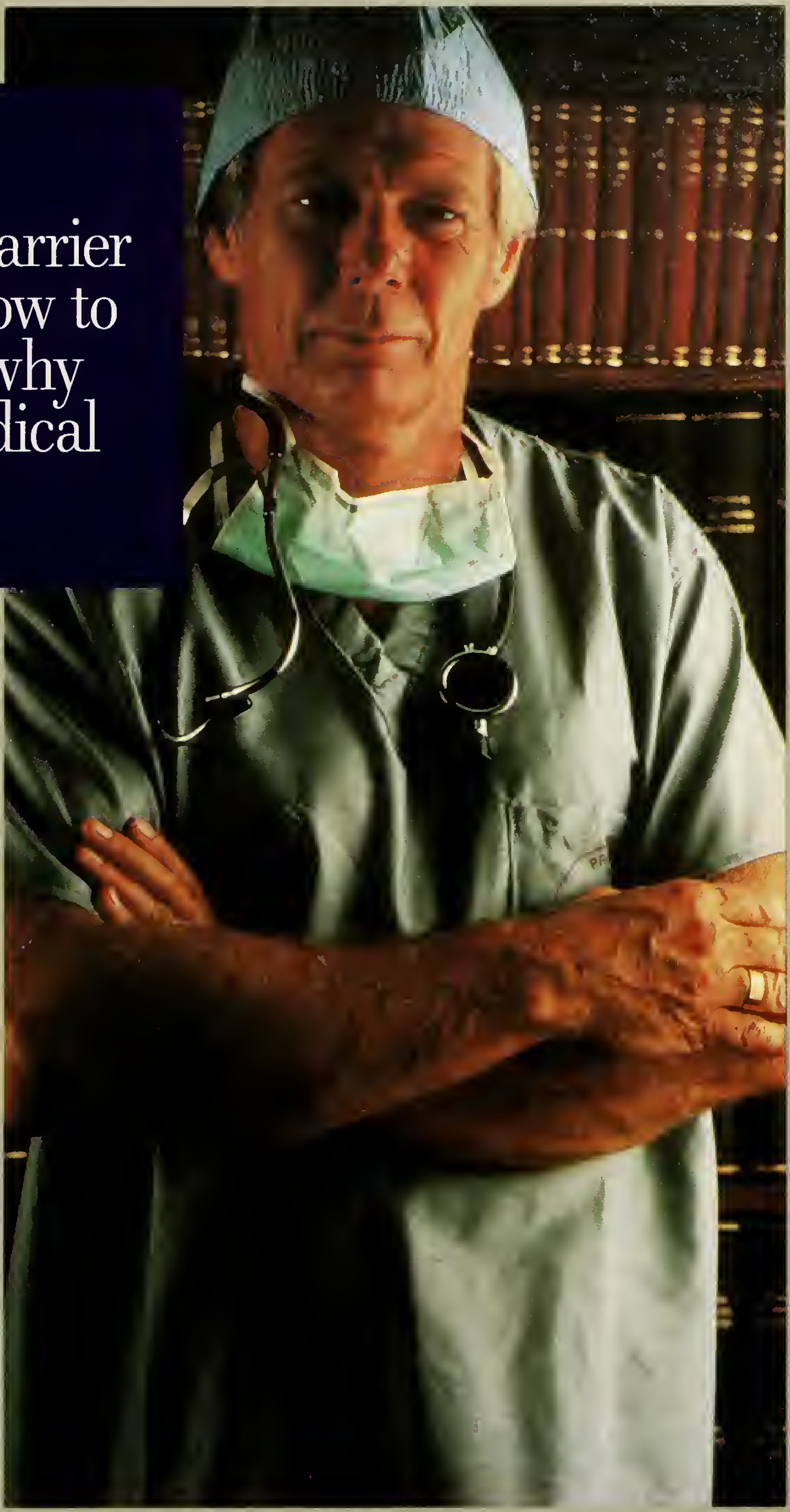
Non-Smoker Annual Rates Shown

★ Premiums are guaranteed for the first 5 policy years.
★ Convertible to any level premium whole life offered by company.
★ Premiums increase each year to age 75 then level.
★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ ______________________
Date of Birth ______________________
Smoker/Non-Smoker (circle one)
Name ______________________
Address ______________________
City/State ______________________
Zip __________ Phone __________



"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."

At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

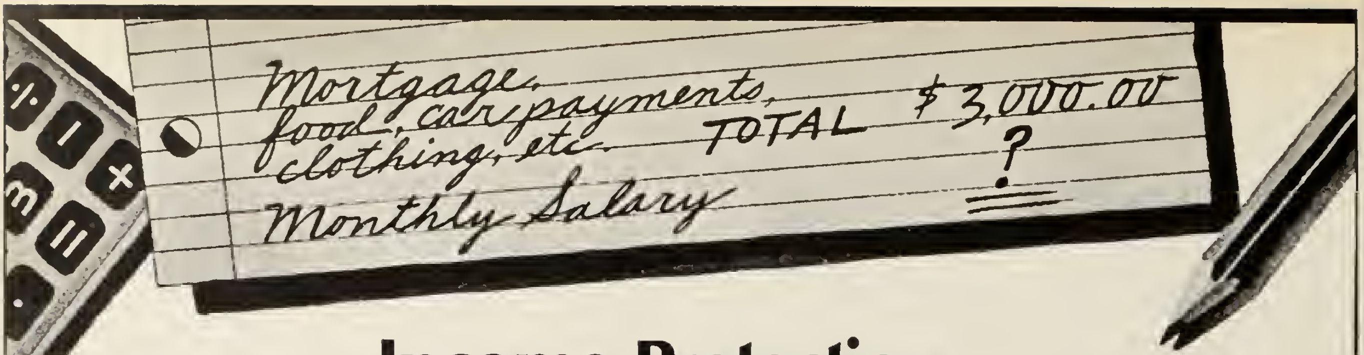
Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222



Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance programs offer you coverage and cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

----------detach here and mail----------

Mail to: **James**
FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______

Address ______

City ______ State ______ ZIP ______

Phone: ( ) ______ Best time to call: ______

Continental Insurance℠
Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

May

1 **Internal Medicine Review: Gastroenterology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

1-13 or 15-26 **Institute on Clinical Health Care Ethics in Catholic Health Care Facilities** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: SLU Center for Health Care Ethics, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8195. **Note:** You may select either session to attend.

4-6 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Engel, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

4-7 **Psychiatry Legal Environment: Medicine's Response** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Internal Medicine Review: Pulmonary** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

11-17 **Medical Malpractice: Law Theory and Practice for Attorneys, Physicians and Risk Managers** — Location: Colonial Williamsburg, VA. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

12 Seminar on Pathology of the Head and Neck — Location: Heartland Hospital West, St. Joseph, MO. Contact: Carlos E. Moya, M.D., Department of Pathology, Heartland Hospital West, 801 Faraon St., St. Joseph, MO 64501. 816/271-7231.

12-13 **Progress in Clinical Pediatrics V** — Location: St. Louis Children's Hospital. Contact: Margo Long, St. Louis Children's Hospital, 400 S. Kingshighway, St. Louis, MO 63110. 1-800-678-4357.

12-13 **2nd Annual Advanced Contact Lens Update** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

13 **One-Day Anesthesia Symposium** — Location: Paul F. Detrick Auditorium, Christian Hospital Northeast. Contact: C. Gerald Giles, CRNA, B.S., Christian Hospital Northeast, 11133 Dunn Road, St. Louis, MO 63136. 314/355-2300, ext. 5022.

15 **Internal Medicine Review: Rheumatology** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

17-18 **Current Management in Critical Care** — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda F. Smutz, Kansas City Southwest Clinical Society, 7920 Ward Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

22 **Internal Medicine Review: Infectious Diseases** — Location: Steinberg Amphitheater, Jewish Hospital, St. Louis, MO. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 **Care of the Patient with Multiple Trauma** — Location: Embassy Suites Hotel, St. Louis, MO. Contact: Nancy Toy, R.N., 5-SICU, 3635 Vista at Grand, P.O. Box 15250, St. Louis, MO 63110-0250. 314/577-8665.

31-June 3 **The Aging Ear** — Location: The Omni International Hotel, St. Louis, MO. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

June

9-10 **Frontiers in Endoscopy: Flexible Endoscopy of the Urinary Tract** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

9-10 **Thorny Medical-Legal Issues** — Location: Westin Hotel, Portland, OR. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

23-25 **Missouri Chapter of the American College of Surgeons Annual Meeting** — Location: Lodge of the Four Seasons, Lake Ozark, MO. Contact: Linda Wheelen, 1926 S. Broadway, Springfield, MO 65807. 417/869-5222.

July

14-15 **Cancer Management Course** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

28-29 **Advanced Trauma Life Support Provider Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8372.

September

29-30 **Advanced Trauma Life Support Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8372.

October

6-8 **Ozark Chest Conference: Lung & Heart/Lung Transplantation** — Location: Tan-Tar-A, Lake Ozark, MO. Contact: American Lung Association of Eastern Missouri, 1118 Hampton Avenue, St. Louis, MO 63139-3196 314/645-5505.

AIM HIGH

A PRESCRIPTION FOR
PHYSICIANS

Bothered by: ★ Too much paperwork? ★ The burden of office overhead? ★ Malpractice insurance costs? ★ Not enough time for the family? ★ No time to keep current with technology and new methods? ★ No time or money for professional development?

Join the Air Force Medical Team. We'll provide the following: ★ Competent and dedicated professional staff ★ Time for patients and for keeping professionally current. ★ Financial security, a generous retirement for those who qualify ★ If qualified, unlimited professional development ★ Medical facilities all around the world ★ 30 days of vacation with pay each year ★ Complete medical and dental care ★ Low cost life insurance

Want to find out more? Contact your nearest Air Force recruiter for information at no obligation. Call

CAPT LAMONT PACK
STATION TO STATION COLLECT
913-491-8640

AIR FORCE

“I switched to occurrence coverage without paying for a tail.”

The Claims Made Trap. If you're caught in it, there's no easy way out. The only way to switch to occurrence, the coverage preferred by most doctors, has been to pay an expensive tail premium. Until now.

Medical Protective, the company that invented professional liability insurance 90 years ago, has a solution. Convertible Claims Made. Now you can get back to occurrence without buying a tail.

And when you choose Convertible Claims Made with Medical Protective, you not only get back on the road to occurrence, you get coverage with one of the most trusted and highly regarded professional liability carriers in America today. For the past 90 years, defending and insuring physicians, surgeons and dentists has been our only business. No one is more experienced or more committed. And our continuous A+ (Superior) rating from the A.M. Best Co. gives you the financial stability and strength that you need and expect from your professional liability carrier.

So, if you would like to escape the Claims Made Trap, look no further. Call us today and we'll show you how Convertible Claims Made makes it easy to step up to occurrence and Medical Protective.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

The Dodson Dividend Plan

A program for workers' compensation insurance that gives you the opportunity to earn a dividend at the end of your policy year, depending on claim experience.

Our Plan has been approved by the Missouri State Medical Association since 1983.

Insured MSMA members have received dividends as high as **35%**. Returns of premium now average **16.22%** per year.

With returns like these, shouldn't you insure with Dodson, too?

1-800-825-3760
Ext. 2990

underwritten by
Casualty Reciprocal
Exchange, member

DODSON GROUP
9201 State Line Road
Kansas City, MO 64114

Why does JACKSON & COKER *recruit more physicians each year than any other company?*

- ☐ Largest pool of available physicians in the nation
- ☐ Network of 7 regional offices nationwide
- ☐ Expertise that produces unparalleled results in recruiting quality physicians
- ☐ Proven system that produced over 1,000 placements in the last 3 years.

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

JACKSON
AND COKER

New Members

■ **Lawrence A. Albani, M.D.,** Suite 320, 2700 Hospital Drive, North Kansas City 64116, has become a member of the Clay-Platte County Medical Society. Dr. Albani received his preliminary education at Rush University and obtained his medical degree at Rush Medical College in 1983. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Albani specializes in urology.

■ **Faisal J. Albanna, M.D.,** 9815 Mackenzie Road, St. Louis 63119, has become a member of the St. Louis Metropolitan Medical Society. Dr. Albanna obtained his medical degree at Vienna University School of Medicine in 1978. He completed his residency at Booth Memorial Hospital, George Washington University, Washington, D.C. Dr. Albanna specializes in neurosurgery.

■ **Wallace P. Berkowitz, M.D.,** 6651 Chippewa, Suite 221, St. Louis 63109, has become a member of the St. Louis Metropolitan Medical Society. Dr. Berkowitz obtained his medical degree at Boston University School of Medicine in 1967. He completed his residency at the University of Chicago, Chicago, IL. Dr. Berkowitz specializes in otolaryngology.

■ **William W. Bohn, M.D.,** Suite T415, 6420 Prospect, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bohn received his preliminary education at Tulane University and obtained his medical degree at the University of Kansas in 1981. He completed his residency at Ohio State University Hospitals, Columbus, OH. Dr. Bohn specializes in orthopedic surgery.

■ **Mark J. Bult, M.D.,** 3660 S. National, Suite 350, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Bult received his preliminary education at the University of Utah and obtained his medical degree at the St. Louis University School of Medicine in 1980. He completed his residency at the Naval Hospital, San Diego, CA. Dr. Bult specializes in anesthesiology.

■ **Richard E. Coin, M.D.,** 621 S. New Ballas Road, #1003, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Coin received his preliminary education at the University of Virginia and obtained his medical degree at the Eastern Virginia Medical School in 1979. He completed his residency at Duke University Medical Center, Durham, NC. Dr. Coin specializes in plastic and hand surgery.

■ **Wilfred W. Cox, M.D.,** Suite 3600, N. Wing, 1900 S. National, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Cox received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1970. He completed his residency at the University of Washington, Seattle, WA. Dr. Cox specializes in medical oncology and hematology.

■ **William E. Dodson, M.D.,** Children's Hospital, 400 S. Kingshighway, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Dodson obtained his medical degree at Duke University in 1967. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Dodson specializes in child neurology.

■ **Paul C. Freiman, M.D.,** 3231 S. National, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Freiman received his preliminary education at Yale University and obtained his medical degree at the Johns Hopkins University School of Medicine in 1982. He completed his residency at the University of Iowa, Iowa City, Iowa. Dr. Freiman specializes in cardiology.

■ **Larry J. Geier, M.D.,** Suite T-101, 6420 Prospect, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Geier received his preliminary education at Rose-Hulman Institute of Technology and obtained his medical degree at the University of Cincinnati in 1979. He completed his residency at Letterman Army Medical Center, San Francisco, CA. Dr. Geier specializes in hematology/medical oncology.

■ **Thomas D. Grisham, M.D.,** 10 Franklin Ave., Washington 63090, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Grisham received his preliminary education at Northwestern University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1981. He completed his residency at the University of Nebraska School of Medicine, Lincoln, NE. Dr. Grisham specializes in family practice.

■ **Douglas W. Hagan, M.D.,** Suite 138, 6400 Prospect, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hagan received his preliminary education at the University of Nebraska and obtained his medical degree at the University of Nebraska College of Medicine in 1984. He completed his residency at the University of Kansas, Kansas City, KS. Dr. Hagan specializes in anesthesiology.

■ **Robert L. Herman, M.D.,** Rockhill Cardiology Group, 6650 Troost, Suite 106, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Herman received his preliminary education at the State University of New York and obtained his medical degree at Jefferson Medical College in 1979. He completed his residency at the USAF Medical Center, Wright-Patterson AFB, OH. Dr. Herman specializes in cardiology.

■ **Virginia A. Hustead, M.D.,** Children's Mercy Hospital, 24th at Gillham Road, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr.

Hustead received her preliminary education at Michigan State University and obtained her medical degree at the University of Michigan Medical School in 1978. She completed her residency at Children's Mercy Hospital, Kansas City, MO. Dr. Hustead specializes in neonatal/perinatal/ pediatrics.

■ **Rita M. Hyde, M.D.,** 1500 N.E. Parvin Road, Kansas City 64116, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hyde received her preliminary education at Pittsburg State University and obtained her medical degree at the University of Kansas Medical School in 1985. She completed her residency at St. Luke's Hospital, Kansas City, MO. Dr. Hyde specializes in internal medicine.

■ **Randall W. Jones, M.D.,** 1509 West Truman Road, Independence 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Jones received his preliminary education at the University of Missouri-Rolla and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1983. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Jones specializes in pathology.

■ **Jin B. Kim, M.D.,** 1965 South Fremont, Suite 3600, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Kim received his preliminary education at Catholic Medical College and obtained his medical degree at the Catholic Medical College, Seoul, Korea in 1977. He completed his residency at the Mount Vernon Hospital, Mt. Vernon, NY. Dr. Kim specializes in physical medicine and rehabilitation.

■ **Gregory S. King, M.D.,** Christian Hospital, 11133 Dunn Road, St. Louis 63136, has become a member of the St. Louis Metropolitan Medical Society. Dr. King obtained his medical education at Washington University School of Medicine in 1978. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. King specializes in pathology.

■ **Alice L. Landrum, M.D.,** University of Missouri, Dept. of Anesthesiology, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Landrum received her preliminary education at Harding College and obtained her medical degree at the University of Arkansas in 1980. She completed her residency at the University of Arkansas, Little Rock, AR. Dr. Landrum specializes in anesthesiology.

■ **Stephen E. Long, M.D.,** 1235 E. Cherokee, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Long received his preliminary education at Indiana University and obtained his medical degree at the Indiana University School of Medicine in 1976. He completed his residency at the Baylor College of Medicine, Houston, TX. Dr. Long specializes in nuclear medicine/ internal medicine.

■ **Michael F. Lytle, M.D.,** Suite 138, 6400 Prospect, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Lytle received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1979. He completed his residency at George Washington Hospital, Washington, D.C. Dr. Lytle specializes in anesthesiology.

■ **Garrett L. Marr, M.D.,** 7301 Mission Road, Suite 225, Prairie Village, KS 66208, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Marr received his preliminary education at the University of Kentucky and obtained his medical degree at the University of Illinois College of Medicine in 1976. He completed his residency at Loyola University, Maywood, IL. Dr. Marr specializes in surgery.

■ **Carnie C. Nulton, M.D.,** Suite T101, 6420 Prospect, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Nulton received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1985. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Nulton specializes in internal medicine.

■ **Shari L. Ommen, M.D.,** Suite 400, 2900 Baltimore, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Ommen received her preliminary education at the University of Missouri and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1985. She completed her residency at St. Mary's, Trinity Lutheran Hospital, Kansas City, MO. Dr. Ommen specializes in family practice.

■ **Susan E. Opper, M.D.,** St. Luke's Hospital, 44th at Wornall Road, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Opper received her preliminary education at Memphis State University and obtained her medical degree at the University of Kansas School of Medicine in 1983. She completed her residency at St. Luke's Hospital, Kansas City, MO. Dr. Opper specializes in anesthesiology.

■ **Fred E. Potts, III, M.D.,** 3525 S. National, Suite 110, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Potts received his preliminary education at Memphis State University and obtained his medical degree at the University of Texas Health Sciences Center in 1977. He completed his residency at Wilforf Hall USAF MC, Lackland AFB, TX. Dr. Potts specializes in anesthesiology.

■ **Syed Shah Noor Ur Rahman, M.D.,** St. Luke's Hospital, Chesterfield 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Rahman obtained his medical degree at the UTESA School of Medicine, Santo Domingo in 1985. He is completing his residency at St. Luke's Hosital, Chesterfield, MO. Dr. Rahman specializes in internal medicine.

■ **Jon A. Reese, M.D.,** 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Reese received his preliminary education at the University of North Texas and obtained his medical degree at the University of Texas Southwestern Medical School in 1981. He completed his residency at the University of Oklahoma Health Sciences Center, Oklahoma City, OK. Dr. Reese specializes in general and vascular surgery.

■ **David B. Rogers, M.D.,** 1900 S. National Ave., Suite 1950, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Rogers received his preliminary education at Drury College and obtained his medical degree at Tulane University School of Medicine in 1979. He completed his residency at the Naval Hospital, San Diego, CA. Dr. Rogers specializes in orthopaedic surgery.

■ **Jamie A. Scott, M.D.,** 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Scott received her preliminary education and obtained her medical degree at the University of Missouri-Kansas City in 1984. She completed her residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Scott specializes in dermatology.

■ **Daniel J. Towle, M.D.,** Suite 138, 6400 Prospect, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Towle received his preliminary education at the University of Notre Dame and obtained his medical degree at the University of Kansas School of Medicine in 1981. He completed his residency at Wilfort Hall Medical Center, San Antonio, Tx. Dr. Towle specializes in anesthesiology.

■ **David A. Woods, M.D.,** 3655 Vista Ave., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Woods obtained his medical degree at the University of Health Sciences/the Chicago Medical School in 1986. He is completing his residency at the St. Louis University Medical Center, St. Louis, MO. Dr. Woods specializes in ophthalmology.

■ **Ravi Xavier, M.D.,** P.O. Box 975, Columbia 65205, has become a member of the Boone County Medical Society. Dr. Xavier received his preliminary education at Loyola College and obtained his medical degree at the Stanley Medical College in 1977. He completed his residency at the New York Medical College, New York, NY. Dr. Xavier specializes in anesthesiology.

■ STUDENT MEMBERS

University of Missouri-Columbia

Richard L. Feldenberg
Randall C. Latorre
Timothy P. Manson
Stephen J. Martin
Lora A. Mills

St. Louis University

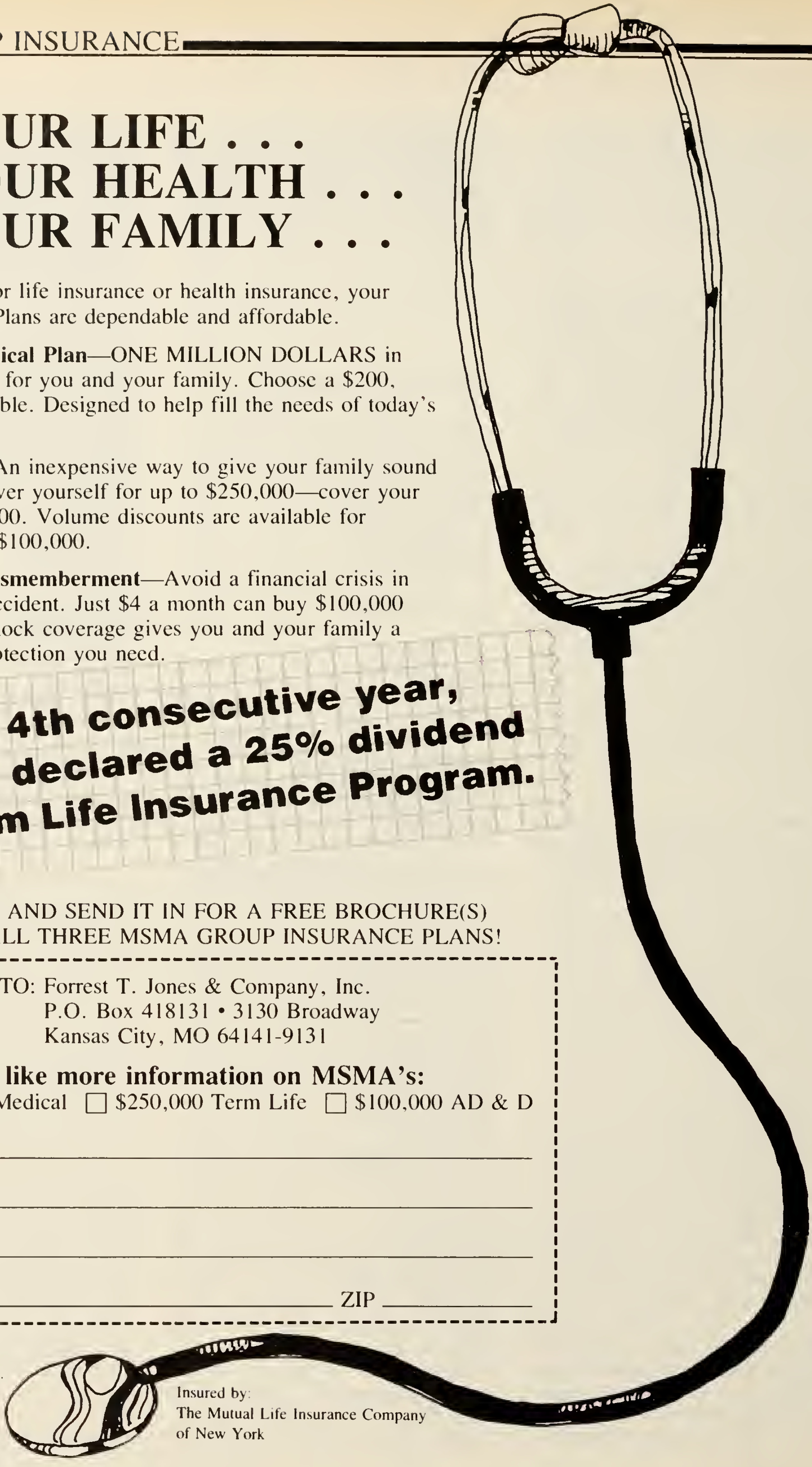
Ramzi Hajjar
David Joyce
Cynthia J. Mueller
Mike Tran

Washington University

Matthew R. Leibowitz
Mary Morgan

University of Missouri-Kansas City

Shilpallsa Amin
Joseph C. Apostol
Sujatha R. Ayyagari
Sandra D. Barnes
Cynthia T. Bernabe
Christine M. Boutwell
Jackie T. Cheng
Geemee Chung
Scott Crader
Thomas D. Demark
Mark L. Dick
Susan J. Ebbinghaus
Grace Y. Fan
Scott A. Garo
Amy K. Hara
Taz J. Harmon
Edward J. Hauptmann
Christina Y.F. Ho
Robert P. Holloway
Heather K. Isom
Ann M. Karty
Derik King
Shakuntala Kothari
Julie Lafferty
Timothy S. Lee
Michelle R. Lemberger
Anne Lyng
Mark S. McAllister
Brian P. McNally
Sacheen H. Mehta
Blaine E. Messing
Elizabeth A. Mullans
Quang T. Nguyen
David T. Nill
Sam L. Page, Jr.
Gregory T. Penny
Sanjay Ramakumar
Robin L. Rinehart
Hugh H. Ryan II
Ira Chandra Singhal
Richard L. Smith
Stephanie A. Smith
Tony Sun
Jose R. Thomas
Philip Tippen
Luan V. Tran
Jerome C. Vallez
Jining Wang
Derek Williams
Monte Wu

MSMA GROUP INSURANCE

FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $200, $500, or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S) ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:

☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ______________________________

ADDRESS ______________________________

CITY ______________________________

STATE ____________________ ZIP __________

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

Insured by:
The Mutual Life Insurance Company
of New York

Medical School News

St. Louis University

■ New Technology and Ethical Implications" was the theme of the *Fourth Annual Drummond Lectures in Medical Ethics,* sponsored by the Center for Health Care Ethics on March 17.

Kathleen Nolan, M.D., M.S.L., a graduate of St. Louis University who is currently associate for medicine at The Hastings Center, was the guest speaker. The Hastings Center is considered the leading ethics center in the United States.

Dr. Nolan addressed ethical concerns behind technological advances in medicine, including maternal-fetal conflicts and implications of mapping the human genome.

The Drummond Lectures in Medical Ethics honor the Rev. Edward J. Drummond, S.J. ,who was the first president of the medical center and served as executive vice president of St. Louis University. He continues to serve as special assistant to the vice president of the medical center.

■ **William E. Johnson Jr., FACHE,** chairman of the board of Meriter Health Services, Inc., delivered *the 17th Annual Reverend John J. Flanagan, S.J. Lecture in Hospital Administration.* The lecture was held on March 21. Johnson spoke on "Caring for the Elderly." In addition, Johnson made a student presentation on the same topic at St. Louis University School of Nursing.

Johnson was appointed to his current position of Meriter Health Services, Inc., Madison, Wisconsin, in January 1989. He became president of the organization in 1987, when Methodist Health Services and General Health Services merged into one organization.

Johnson has been very active in the American College of Healthcare Executives, serving as chairman from 1985-86. He is also on the faculty and is a preceptor in the graduate programs in Health Services Administration at the University of Minnesota and the University of Wisconsin.

The Flanagan Lectures is sponsored by the Alumni Association of the department of hospital and health care administration at the Center for Health Services Education and Research of St. Louis University Medical Center. The lecture honors Father Flanagan, who founded the University's department of hospital administration in 1947.

■ Studies indicate that 8-10% of those working in the medical community have chemical dependency.

Addressing this issue, *the Ninth Annual Michael F. Conley, M.D., Memorial Lecture* was presented at St. Louis University School of Medicine on March 3. **Douglas Talbott, M.D.**, director of medical and clinical services of Talbott Recovery Systems in Atlanta, discussed the impaired health professional in a lecture titled "It Couldn't Happen to Me."

Dr. Talbott holds a faculty position as clinical professor of psychiatry at Emory University School of Medicine. He is also a certified addictionologist, bringing a background as an internist and cardiologist to his specialty.

He has gained nationwide recognition for successfully treating more than 3500 health professionals throughout the United States. Dr. Talbott has authored three books and has had more than 75 articles published.

The Michael F. Conley, M.D., Lectureship is sponsored by Department of Community Medicine and presented at Internal Medicine Grand Rounds. It raises awareness of the drug dependency which can evolve in the medical environment due to the rigorous training health professionals undergo. The lecture was initiated in 1981 by the friends and relatives of the late Dr. Conley, a 1975 graduate of the St. Louis University School of Medicine.

■ Four physicians from St. Louis University Medical Center and a clinical nurse specialist were featured in a statewide television special on cancer and cancer prevention. The program, called "Profiles in Survival," was sponsored by the American Cancer Society and aired April 22 on KTVI Channel 2.

In conjunction with the television program, St. Louis University Medical Center co-sponsored a free oral cancer screening held that same day at the downtown St. Louis Centre.

"Profiles in Survival" was produced by the American Cancer Society It featured **Michael D. Maves, M.D., Keith S. Naunheim, M.D., Courtney Crim, M.D., William A. Knight, M.D.,** and **Kathleen B. Merlo.**

■ **Thomas Forrester, M.D., Ph.D.,** associate professor of physiology and assistant professor of internal medicine, St. Louis University School of Medicine, has been invited to act as External Examiner in the field of medical physiology at Kin Abdulaziz University College of Medicine and Allied Sciences in Jeddah, Saudi Arabia. This is Dr. Forrester's second invitation; a similar invitation was accepted in 1985.

The position of External Examiner is common in European medical school systems. Typically, a university has both written and oral examinations. However, to prevent political infighting or the appearance of favoritism, experts from outside the university are often invited to assess the standard of teaching and conduct oral student examinations.

Dr. Forrester will be in Saudi Arabi June 21-30. He said both invitations resulted from his teaching in Glasgow, Scotland. Dr. Forrester received his doctorate degree in physiology from the University of Glasgow in 1967. He joined the faculty of St. Louis University School of Medicine in 1975.

■ **Howard M. Deuce, M.D.**, assistant professor of internal medicine in the division of allergy and immunology, St. Louis University School of Medicine, has been named principal investigator for a one-year, $20,000 grant from the State of Missouri to explore the "Physiology of Olfactory Loss and Etiology of Alzheimer's Disease."

The study will focus on patients with Alzheimer's disease who, in previous studies, have been shown to have a selective loss of the sense of smell. Some researchers believe that this loss may be connected to the cause of the disease.

Dr. Druce has been director of the nasal and paranasal sinus physiology laboratory since 1985. He earned his medical degree from the University of London, Middlesex Hospital Medical School.

University of Missouri Kansas City

■ UMKC seniors fared well in this year's residency match with a 96% match rate for the 72 participants, compared with the national rate of 93.6% matched. Twenty of UMKC's seniors are entering internal medicine, followed by 10 entering general surgery or a surgical specialty. Other frequently chosen specialties included radiology, pediatrics, and anesthesiology, with four students each, and ophthalmology, emergency medicine and psychiatry with three students each. Thirty-six of UMKC's seniors will stay in Missouri for their residencies and six will go to Kansas. Another four students will be in Texas, three each in Florida, California and Colorado and two each in Alabama, Ohio, Massachusetts and Minnesota. The remainder of the '89 class will be dispersed individually across the country.

■ Members of the Class of '89 will accept their diplomas May 26 after a full roster of activities highlighted by the annual *Migliazzo Lecture.* This year's speaker will be **David E. Roers, M.D.**, who in fall 1986 was appointed the first *Walsh McDermott University Professor of Medicine* at the Cornell University Medical College, New York, NY. For 15 years preceding this appointment, Dr. Rogers was president of The Robert Wood Johnson Foundation, Princeton, N.J.

Dr. Rogers is a member of numerous medical societies and organizations, the recipient of six honorary degrees, and has been editor of **The Year Book of Medicine** since 1966. He also is author of more than 200 scientific publications in the fields of infectious disease, medical education, the special medical problems of the underserved, and problems in the delivery of health care.

■ The annual *Edward J. Twin, M.D. Memorial Society Lecturer* was **Mr. Homer Wadsworth**, a longtime supporter of Hospital Hill. To reinforce his loyalty to the area he donated his honorarium to the Kansas City Cares Committee. The committee earlier this year assisted a successful campaign to pass the health levy that will provide important financial support to Truman Medical Center and Children's Mercy Hospital. Both hospitals are primary teaching institutions for UMKC. One of the original consultants to the Chancellor in the founding of the School of Medicine, Mr. Wadsworth is a former director of the Kansas City Association of Trusts and Foundations, and now is emeritus director of the Cleveland Foundation. He will speak on behalf of the Twin Society on May 25 in the School of Medicine.

■ The Eye Foundation of Kansas City, which is affiliated with UMKC and Truman Medical Center, will host several events of the weekend of June 10-11. A June 10 Eye Foundation Ball, a black-tie event, will be held at the Hyatt Regency Hotel, and the third annual Sight-a-thon, a 5K run on June 11 also will commemorate the official opening of the facility's second floor, which will house a faculty specialty clinic, an auditorium, and facilities for clinical research.

■ **Edward L. Mosby, D.D.S.**, associate professor and vice chairman, Department of Hospital Dentistry, recently was elected to fellowship in the American College of Dentists, as well as to fellowship in the International Association of Oral and Maxillofacial Surgeons.

■ **John Foxworth, Pharm. D.**, is author of "Toxicities of Antimicrobial Agents Used in the Critical Care Arena," which was published this year in *Critical Care Nursing Quarterly.*

■ **Steven D. Waldman, M.D.**, clinical associate professor of anesthesiology, is a 1989-90 member of the Cancer Pain Clinic Standards Committee for the American Society of Regional Anesthesia. He also is author of "Selection of Implantable Narcotic Delivery Systems, in *Anesthesia & Analgesia,* Vol. 68, 1989.

■ Fourth-year medical student **Catherine Y. Spong** recently was awarded an Alpha Omega Alpha Student Research Fellowship for $2,000. Ms. Spong has been involved in several research projects with associate professor **Mahmoud Ahmed, Ph.D.**, concerning the maternal use of cocaine and its effects on the placenta and the fetus.

■ **Margaret A. Dolan, M.D.**, instructor in pediatrics, presented two papers at the American Academy of Pediatrics national meeting in San Francisco. Co-authors of "SIDS Resuscitation: When to Stop?" were **Vidya Sharma, M.D.**, associate professor, and **Donald R. Forgue**, associate professor. She also presented "A Trauma Curriculum for Pediatric Residents." Co-authors were **Jane Knapp, M.D.**, associate professor, and **Laura Fitzmaurice, M.D.**, assistant professor.

Washington University

■ C. **Robert Cloninger, M.D.**, has been named head of the Department of Psychiatry at Washington University School of Medicine. He also will become psychiatrist-in-chief at Barnes Hospital. His appointment is effective July 1. Cloninger is Professor of psychiatry and genetics at Washington University School of Medicine, and director of outpatient psychiatry at

Jewish Hospital at the medical center. He is also a consulting psychiatrist at Malcolm Bliss Mental Health Center.

Dr. Cloninger replaces **Samuel B. Guze, M.D.**, who is retiring as department head.

■ **D. Bruce Merifield, Ph.D.**, assistant secretary for technology policy for the U.S. Department of Commerce, delivered the third *Henry G. Schwartz Lectureship* on April 24 at Washington University School of Medicine.

Merrifield is best known for his efforts to encourage U.S. economic competitiveness. He received his doctorate in physical organic chemistry from the University of Chicago and worked in research, research administration and new venture management before joining the Department of Commerce.

The Schwartz Lectureship was created in 1983 to honor **Henry G. Schwartz, M.D.**, *August A. Busch, Jr. Professor of Neurological Surgery* at Washington University.

■ **Linda B. Cottler, Ph.D.**, an epidemiologist with the Department of Psychiatry, has received $797,000 from the National Institute on Drug Abuse to study the prevalence of HIV infection in intravenous drug users and their needle-sharing and sexual partners. It is the first study of its kind in St. Louis.

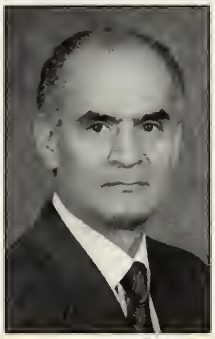
The St. Louis study will follow about 650 subjects including 300 IV drug users, 150 non-IV drug users and 200 sex partners.

■ Researchers at the Lipid Research Clinic at Washington University School of Medicine need volunteers for a study testing an investigational drug to lower cholesterol. **Ann Goldberg, M.D.**, is the principal investigator. For more information contact Keely Cook at 314/361-8841.

University of Missouri-Columbia

■ **Javad H. Kashani, M.D.**, professor of child psychiatry, has been selected to receive the *1989 Blanche F. Ittleson Award for Research in Child Psychiatry*, the nation's highest honor in child psychiatry.

The president of the American Psychiatric Association presented the award to Dr. Kashani at a special honors convocation during the association's 142nd annual meeting in San Francisco this month.



The award recognizes a psychiatrist for outstanding research in child psychiatry, published during the past five years, which has led to major advances in promoting the mental health of children. Dr. Kashani previously has been honored by the Missouri Mental Health Commission for his leadership in providing psychiatric services to the children of the state and for demonstrating exceptional academic, clinical and administrative skills.

Dr. Kashani is a member of the editorial board of the *Journal of the American Academy of Child and Adolescent Psychiatry* and is an editorial referee for numerous psychiatric and psychological journals. His investigations of the epidemiology of childhood psychiatric disorders, especially of depression, are recognized throughout the world as the basic work in the field.

■ **Gordon D. Brown, Ph.D.**, professor and director of the Health Services Management Program, received the American College of Health Care Administrators 1989 Public Service Award at the group's annual convocation in Honolulu in April.

The award recognizes an individual who has promoted public awareness of long-term care. The ACHCA is a non-profit professional association that promotes quality care through advancement, education and certification of its members. ACHCA's 6,500 members are administrators of long-term health and residential care facilities, agencies and programs.

Dr. Brown is known for his work to improve the design and delivery of Missouri's administrator-in-training program, his eight-year service as a member of the Editorial Advisory Board of ACHCA's *Journal of Long-Term Care Administration*, and his many publications and research reports on health care management. He also has been chairman of ACHCA's Professional Certification Committee since 1985.

■ **Armando R. Favazza, M.D.**, professor and associate chairman of psychiatry, presented a talk on "Care of the Self-Harm Patient" at the 15th International Symposium on Psychopharmacology in Louisville, Ky., in March.

■ **Barry J. Gainor, M.D.**, associate professor of orthopedic surgery, will participate in several activities in the West Indies this month. He will be conducting an amputee screening clinical at St. Jude Hospital on the island of St. Lucia. Accompanied by **Joel Jeffries, M.D.**, resident physician, and **Sylvia M. Petro, R.N.**, orthopedic nurse, Dr. Gainor will supply prostheses for the patients there. This project is funded by donations from the University of Missouri Orthopedic Association and volunteer orthopedic surgeons through Orthopedics Overseas. Dr. Gainor also will attend the 6th annual meeting of the Southern Orthopedic Association and is to present his abstract titled "Advantages of Wrist Arthrodesis by Intramedullary Rod Fixation" on May 5 in Antigua.

■ **Karl D. Nolph, M.D.**, professor and chief of the division of nephrology, in January presented "An Overview of Renal Replacement and the Role of Peritoneal Dialysis" as a visiting professor at the Royal Victoria Hospital at McGill University in Montreal.

■ **David J. Pintel, Ph.D.**, assistant professor of microbiology, has received a Career Development Award from the National Institutes of Health. The award, which runs for five years beginning April 1, is for $50,000 per year. Dr. Pintel's research deals with parovirus with gene expression.

■ About 1400 health professionals from around the world participated in the ninth annual Conference on Peritoneal Dialysis, sponsored by the University of Missouri-Columbia, in Dallas in

continued on page 296

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

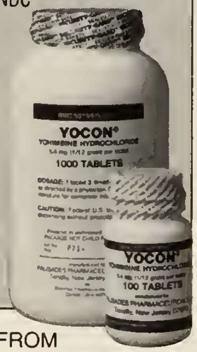
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

CARAFATE®
(sucralfate) Tablets

BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

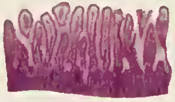
Reference:
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

CAFAD276 0160N8

Carafate® for the ulcer-prone NSAID patient

Aspirin and other nonsteroidal anti-inflammatory drugs weaken mucosal defenses, which may lead NSAID users to become prone to duodenal ulcers.[1] For those NSAID users who do develop duodenal ulcers, CARAFATE® (sucralfate/Marion) is ideal first-line therapy. Carafate rebuilds mucosal  defenses through a unique, nonsystemic mode of action. Carafate enhances the body's natural healing ability while it protects damaged mucosa from further injury. So the next time you see an arthritis patient with a duodenal ulcer, prescribe nonsystemic Carafate: therapy for the ulcer-prone patient.

Unique, nonsystemic

CARAFATE®
sucralfate/Marion

CAFAD276

Please see brief summary of prescribing information, and reference on adjacent page.

0160N8

CARAFATE®
(sucralfate) Tablets

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

Reference:
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

CAFAD276 0160N8

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

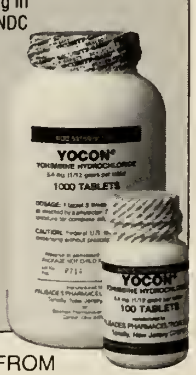
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.**, P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Arkansas Dept. of Health 270
Bounds, Poger & O'Donnell 268
Dodson Insurance 286
Eli Lilly 262
Forrest T. Jones 290
Fred S. James 282
I.C. System 296
Jackson & Coker 286
Marion Labs 270A-B,294A-B
Medical Defense Associates 264
Medical Protective Company 285,281
MOMEDICO 254
Palisades Pharmaceuticals 294
PIE Mutual Insurance Company 302
Professional Data Services 258
Prudential-Bache Securities 256
Roche 303-304
Risk Control Associates 301
United Missouri Banks 297
U.S. Airforce 284
Wes Woodbury 280

continued from page 293

February. Conference Chairman **Karl D. Nolph, M.D.**, professor and chief of the division of nephrology, says that in the nine years MU has sponsored such a conference attendance has skyrocketed, scientific abstracts have flooded in from 23 countries and MU has become known as a world leader in the research and development of dialysis methods for patients with kidney failure.

Dr. Nolph and his MU colleagues **Ramesh Khanna, M.D.**, associate professor, and **Zbylut Twardowski, M.D.**, professor, participated in several discussions at the conference. Dr. Nolph presented "CAPD, CCPD Overview: Final NIH CAPD Registry Report and Summaries of Special Studies"; Drs. Twardowski and Khanna participated in a session called "Quiz the Experts" and Dr. Twardowski presented "Morphology of the Catheter exit Site and Tunnel."

■ Several members of the division of immunology and rheumatology will present abstracts to the Arthritis Health Professions Association and the 53rd annual meeting of the American College of Rheumatology in Cincinnati in June: **Lawrence J. Rettenmaier, M.D.**, fellowship trainee; **Gordon C. Sharp, M.D.**, professor and chief of the division; **Yoshihiko Takeda, M.D.** research fellowship trainee; **Robert W. Hoffman, D.O.**, assistant professor; **Kou-Ching Hsu, M.D.**, fellowship trainee; **Marian A. Minor, MSPH**, clinical instructor; **Donald R. Kay, M.D.**, associate professor; **Basanti Mukerji, M.D.**, fellowship trainee and **Sara E. Walker, M.D.**, professor.

The following members of other departments also contributed to the abstracts to be presented: **Alan C. Luger, M.D.**, associate professor of pathology; **John Reid, Ph.D.**, professor of educational resources; **Joyce A. Mitchell, Ph.D.**, associate professor of child health; **Jerry C. Parker, Ph.D.**, clinical assistant professor of psychiatry; **Paul Kaplan, M.D.**, professor and chairman of physical medicine and rehabilitation; **Joseph A. Johnston, Ph.D.**, professor of psychology; **J. Chen, Ph.D.**, research assistant; **Richard J. Wang, Ph.D.**, research assistant, and **Marilyn Sanford, P.T., Ph.D.** clinical assistant professor of physical therapy.

■ The Department of Anesthesiology has awarded the *Amanda Leonard Memorial Fund Scholarship* to **Marsha Cramer**, a student in the Surgical Technology Program of the Columbia Public Schools Health Occupation Center. The scholarship is made possible by friends and colleagues of the late Amanda Leonard, who for 18 years served as the head nurse and supervisor of the operating rooms at the MU Health Sciences Center. Ms. Cramer received the scholarship because of financial need, scholastic excellence and potential for success. She will graduate in June.

■ The University of Missouri-Columbia Hospital and Clinics has expanded its fertility services by establishing a sperm bank, one of only two sperm banks in Missouri and one of about 34 registered sperm banks in the country. **Jawad Ali, Ph.D.**, assistant professor of surgery and director of the Laboratory for Fertility and Cryobiology, says the sperm bank will provide two basic services, therapeutic donor insemination and storage prior to medical procedures that can cause sterility.

You didn't spend umpteen years in school in order to become a bill collector.

Collecting money from slow-paying patients is critical to your practice. But you didn't spend all those years in school to become a bill collector.

And that's where I.C. System can help.

First of all, we have the resources and expertise to do the job. And while we're tenacious, we treat your delinquent patients with courtesy and respect.

In fact, our work is endorsed by over 1,200 professional associations and societies, including yours. And no matter where you're located or where your debtors live, we have local representatives to service your account.

But most important, we *guarantee* results, by collecting *at least ten times the amount of our retainer.*

To find out how the I.C. System approach can work for you, call toll free (800) 443-4123, ext. 621. In Minnesota, call (612) 483-8201, ext. 621.

I.C. System®
The System Works.®

3385-2

In **1957,** Sputnik became the first man-made earth satellite, the New York Giants moved to San Francisco and United Missouri opened its Investment Counsel Department.

United Missouri Bank announced Investment Counsel Services in '57. It didn't make national headlines. It did make a difference.

Since then, United Missouri has helped thousands of people build solid investment portfolios.

United Missouri has done it by building a large department of investment experts. These experts have offered individual attention to each customer.

They've carefully analyzed each customer's needs. They've constructed portfolios unique to each customer. And, they've offered all customers the choice to make their own decisions, or to have the bank manage their portfolios on a discretionary basis.

As a result, each United Missouri customer has witnessed consistent growth through years of economic change.

Today, United Missouri's Investment Counsel Department still makes a difference. It can make a difference for you. For your investment portfolio, call United Missouri's Stuart Murdock at 556-7340. And, pick the proven performer.

UNITED MISSOURI BANKS
Members FDIC

P.O. Box 419226, Kansas City, Missouri 64141-6226

MISSOURI MEDICINE

Classified Advertising Form

1. Please print or type all information requested and return this form to Valerie A. Peters, Editorial Assistant, MISSOU MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. **Deadlines for publication are the first of t month preceding the month of publication.** The deadline is the same for cancellation of a current ad. For examp An ad to run in the November issue should be received by MISSOURI MEDICINE no later than October 1. An ad runni in the October issue that the advertiser wants to cancel for November should also be cancelled, in writing, no later th October 1. **Classified advertising costs:** $25.00 for non-members for the first 50 words or less, and 25¢ per word aft that. The cost is $15.00 for members for the same ad, plus 25¢ per word beyond 50 words. File numbers cost an extra $1.2

NAME ______________________________

ADDRESS ______________________________

CITY ____________ **STATE** ____________ **ZIP CODE** ____________

SIGNATURE ____________ **TELEPHONE** ____________

2. Check here if you want your ad to run continuously until you cancel. If you want to specify only certain months, skip this and go to number 3. ☐

3. Check here to specify the months your ad should run. Place the last two digits of the year in the blanks. Check to be sure you mail the ad prior to the deadline. No late ads will be accepted.

☐ Jan. 19 ___
☐ Feb. 19 ___
☐ Mar. 19 ___
☐ April 19 ___
☐ May 19 ___
☐ June 19 ___
☐ July 19 ___
☐ Aug. 19 ___
☐ Sept. 19 ___
☐ Oct. 19 ___
☐ Nov. 19 ___
☐ Dec. 19 ___

4. Check here if you want ad responses sent to you via a File number. This costs an additional $1.25. ☐

5. Check the heading you want your ad placed under.

☐ Art For Sale
☐ Equipment For Sale
☐ Real Estate
☐ Physician Wanted
☐ Locum Tenens
☐ Other ______________________________
☐ Practice For Sale
☐ Misc. For Sale
☐ Position Wanted
☐ Services

6. Check method of payment:

☐ Check made payable to MSMA. Amount $ __________
☐ Please bill me.

7. Use the lines below to print or type the ad exactly as it should appear. Additional paper may be used to complete the ad.

____

____

____

____

Classifieds

Physicians Wanted

ORTHOPEDIC SURGEON — BE/BC. Progressive JCAHO hospital and medical staff located in University community of Northwest Missouri is seeking orthopedic surgeon to serve people in area with high sports interest, high percent of elderly, and documented desire and need for specialty services. Community provides hometown livability with big city accessibility. Located approximately two hours from Kansas City, Omaha, and Des Moines. Contact: Martin Goedken, VP, St. Francis Hospital, 2016 South Main Street, Maryville, MO 64468-2693 or call collect: 816/562-2600, Ext. 5001.

EMERGENCY DEPARTMENT PHYSICIAN: St. Anthony's Medical Center in South St. Louis County is seeking a physician to join the Emergency Department immediately. Our 20-bed Emergency Department provides care for 49,000 patients annually with triple physician coverage during peak hours and 24-hour pediatric coverage. An excellent salary and benefits package is offered. Contact Raana Ponstingl, M.D., Medical Director, Emergency Department, St. Anthony's Medical Center, 10010 Kennerly Rd., St. Louis, MO 63128; 314/525-1905.

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

INTERNIST — BE/BC. For progressive community in Northwest Missouri with State University. Solo or join established internist. Excellent JCAHO Hospital Facilities including CT Scanning, Ultrasound, Nuclear Medicine, Doppler Studies, Endoscopies, Cardiac Stress Testing, Holter Monitor. Good physician complement available with subspecialty representation. Contact Martin Goedken, VP, St. Francis Hospital, 2016 South Main, Maryville, MO 64468; 816/562-2600.

FAMILY PRACTICE — BE/BC. To join established practice of Obstetrician and Family Practitioner. For progressive community in Northwest Missouri with State University. Excellent JCAHO hospital facilities. Good physician complement available with subspecialty representation. Contact: Martin Goedken, VP, St. Francis Hospital, 2016 South Main, Maryville, MO 64468; 816/562-2600.

PEDIATRIC OR RETINAL OPHTHALMOLOGIST, Kansas City. Fellowship-trained pediatric-strabismus or retinal ophthalmologists to join board certified generalists and establish first subspecialty department. Ultramodern office with state-of-the-art equipment and vigorous growing practice. Some general Ophthalmology until subspecialty established. Ethical. Stimulating environment-clinical research — 40 papers published from our practice. Exceptional offer — salary, fringes, production incentive. Contact: John C. Hagan, III, M.D.,FACS, Midwest Eye Institute of Kansas City, 2700 Hospital Drive, North Kansas City, MO 64116.

ONE PSYCHIATRIST — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board certified or eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, board certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). For information contact: Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

EMERGENCY MEDICINE, COLUMBIA: Emergency physician wanted for private, not-for-profit hospital in university town. Medical staff and facility are progressive and state-of-the-art. Competitive salary and benefits which include paid malpractice insurance (occurence!), health insurance, dental insurance, educational leave and one-month paid vacation. Freestanding emergency clinic and rural health clinic shifts also available. Interested physicians should send CV and letter of inquiry to Roger Willcox, M.D., FACEP, Director of Emergency Services, Boone Hospital Center, 1600 E. Broadway, Columbia, MO 65201.

FAMILY PRACTICE — HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hopsital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar oppor-

Physicians Wanted

tunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435, 612/835-5123.**

FAMILY PRACTICE for single-specialty group in Ozark Mountain Country. Excellent opportunity in clinic. Guaranteed minimum. For information contact: Sandra Mizell, Office Manager, at 417/256-2111.

FAMILY PRACTICE – Acute care facility in Central Iowa seeks family practitioner to join group. Thriving practice; two clinics with strong hospital support. Call coverage and backup excellent; obstetrics required. Hospital and clinics well-equipped and have spacious facilities. Desirable community, offering competitive income and benefits. Call Michael Krier, 1-800-332-0488.

PART-TIME MEDICAL CONSULTANT – STATE BOARD OF HEALING ARTS. Responsible for providing consultation and expert medical evaluation and advice to the Board on the medical/technical evaluation of malpractice cases, consumer complaints and investigations. Must be a graduate from an accredited school of medicine or osteopathy and successful completion of a residency program as approved by an appropriate American specialty board and recognized by the AMA or the AOA; supplemented by 10 years of professional medical experience; and licensed to practice medicine in the State of Missouri. Starting salary $21,600. Send resumes to P.O. Box 4, Jefferson City, Missouri, 65102.

Investment

$5,000-$60,000: FOR PHYSICIANS – Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including Taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Services

PHYSICIANS. **PROVIDER PLACEMENT SERVICES** specializes in the relocation of physicians throughout the U.S., with special emphasis in the southeast. Currently, we have several hospitals/clinics/groups with openings. All fees paid by employer. All inquiries kept in strict confidence. No obligation. Send CV/Resume to: PPS, ATTN: Mr. Scott, 2221 University Blvd., West, Jacksonville, FL 32217, or call toll free 1-800-848-8722.

Equipment for Sale

MEDICAL OFFICE EQUIPMENT from ambulatory care center, that includes laboratory and X-ray equipment, audio booth, Holter Monitor and large trash compactor. Used 1 ½ years. If interested call 417/869-7006. Ask for Sybil.

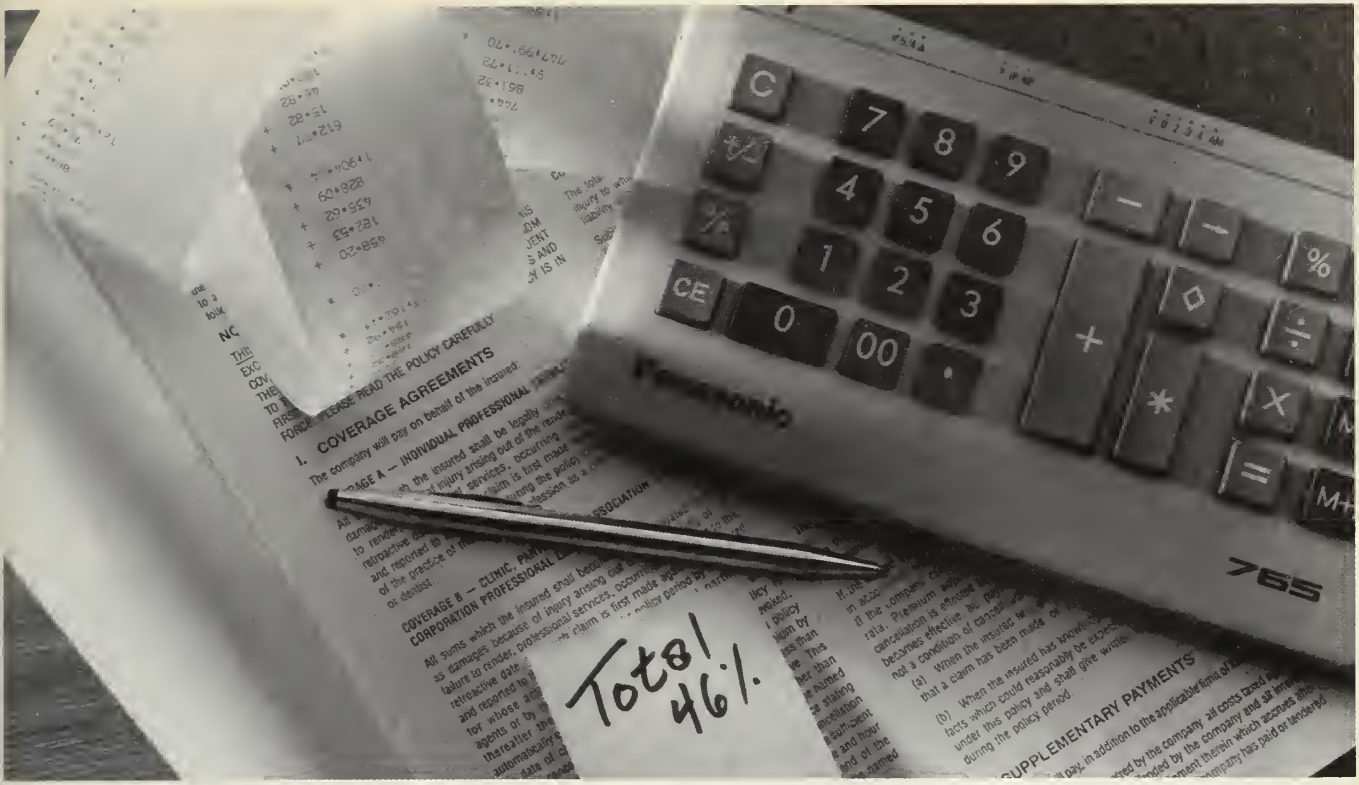
CYSTO AND RESECTOSCOPE SET. New in boxes. Stortz instrument. Never have been used. Will sell for less than current market price. Also have loops, cold light source, cords. Pediatric set also available. Send inquiries to: **File #24, c/o Missouri Medicine**, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

WHY AMA?

Through the AMA library you can have immediate access to a vast store of medical, scientific, and socio-economic information. The library maintains a large collection of books, journals, and microfilm and provides instant on-line access to countless information sources through computerized data bases. The AMA library: it's one more good reason why you should be a part of the AMA.

To Join,
Contact your county or state medical society or write: Division of Membership, AMA, 535 North Dearborn Street, Chicago, Illinois 60610 or call collect, (312) 751-6196.

AMA AMERICAN MEDICAL ASSOCIATION



Introducing Claims Paid Coverage From Risk Control Associates

Save Up to 46% on Your Premiums with Guaranteed Rates for 3 Years!

Cut Your Liability Insurance Costs Up to 46% With Our NEW Claims Paid Coverage. If you are tired of the high cost of Medical Liability Insurance, now there is something you can do about it. It's called **Claims Paid** coverage, and it can cut your premium costs up to 46%. **And we guarantee a level premium for 3 years if you join now!**

Claims Paid is a bold new concept in medical liability coverage. It offers the benefits of full protection at a fraction of the cost. Risk Control Associates is the only company to offer this innovative plan to the physicians and dentists of Missouri.

Our New Claims Paid Policy is Designed for Maximum Protection at a Much Lower Premium. Risk Control Associates can offer reduced premiums for **Claims Paid** policies because premiums are based on money actually paid out. And **Claims Paid** Insurance is available in the same coverage options as Occurrence and Claims Made policies.

If you are currently insured under one of our other policies, you can easily convert your coverage to **Claims Paid.**

Risk Control Associates is a Leader in Innovation and Services. Risk Control Associates is Missouri's leader in the Medical Liability Insurance field. We are owned and managed by physicians, so we know what is important to you. We understand your need for maximum protection and excellent service. And we deliver both. We are "Physicians Helping Physicians."

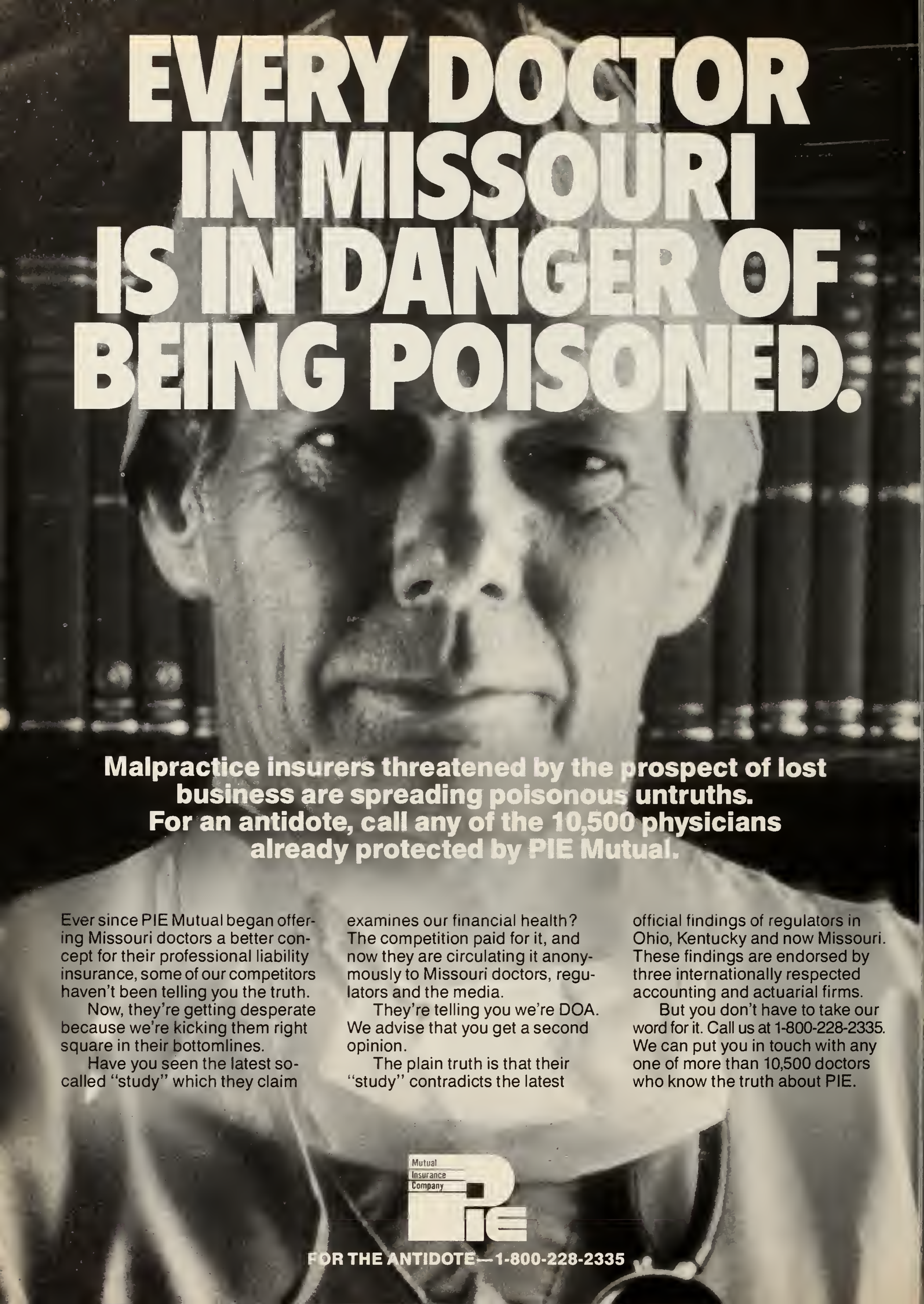
For more information about our new **Claims Paid** Policy, call for our free brochure, "Understanding Claims Paid Medical Liability Insurance" or ask to speak with a company representative. Our phone number is (800) 422-5122. We will be glad to answer any questions you may have.

You can start saving up to 46% on your insurance premiums right away, **so contact us today.** It will mean significant savings to you and an excellent investment in your future.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS
Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

1111 S. Glenstone • Suite 3-102
Springfield, Missouri 65804
(800) 422-5122 • (417) 862-0650



EVERY DOCTOR IN MISSOURI IS IN DANGER OF BEING POISONED.

Malpractice insurers threatened by the prospect of lost business are spreading poisonous untruths. For an antidote, call any of the 10,500 physicians already protected by PIE Mutual.

Ever since PIE Mutual began offering Missouri doctors a better concept for their professional liability insurance, some of our competitors haven't been telling you the truth.

Now, they're getting desperate because we're kicking them right square in their bottomlines.

Have you seen the latest so-called "study" which they claim examines our financial health? The competition paid for it, and now they are circulating it anonymously to Missouri doctors, regulators and the media.

They're telling you we're DOA. We advise that you get a second opinion.

The plain truth is that their "study" contradicts the latest official findings of regulators in Ohio, Kentucky and now Missouri. These findings are endorsed by three internationally respected accounting and actuarial firms.

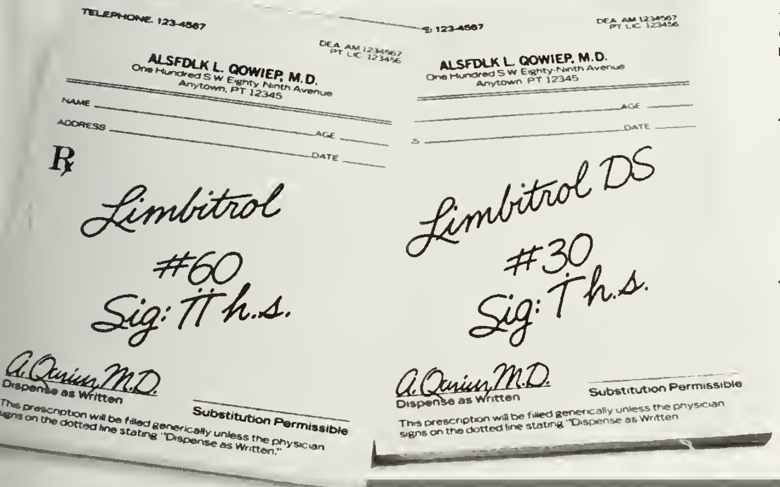
But you don't have to take our word for it. Call us at 1-800-228-2335. We can put you in touch with any one of more than 10,500 doctors who know the truth about PIE.

Mutual
Insurance
Company
PIE

FOR THE ANTIDOTE—1-800-228-2335

In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



TELEPHONE. 123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty Ninth Avenue
Anytown, PT 12345

NAME
ADDRESS AGE
DATE

℞

Limbitrol
#60
Sig: ïï h.s.

A. Quinn M.D.
Dispense as Written

Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written."

S: 123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown PT 12345

AGE
DATE
S

Limbitrol DS
#30
Sig: i h.s.

A. Quinn M.D.
Dispense as Written

Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written

Protect Your Prescribing Decision:
Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner JP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

Limbitrol® Ⓘⓥ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE **Roche Products**

Roche Products Inc
Manati, Puerto Rico 00701

P I 0288

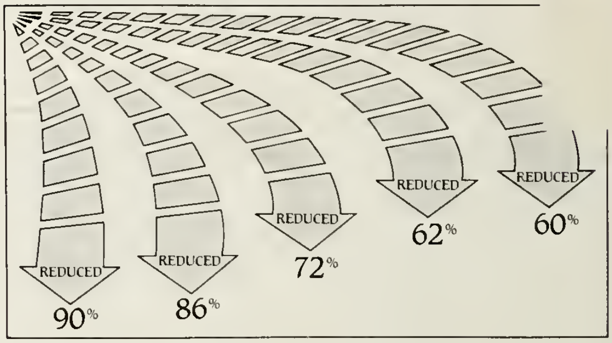
In the depressed and anxious patient

See Improvement In The First Week

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Percentage of Reduction in Individual Somatic Sym
During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

ROCHE Roche Products

Copyright © 1989 by Roche Products Inc. All rights reserved.
Please see summary of product information inside back cover.

EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

Journal of the Missouri State Medical Association

June 1989

[redacted]

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
JUN 8 1989

You didn't go into medicine to become a human target.

Every day you put your reputation and practice on the line. And, with the increasing barrage of malpractice claims, your business has become a virtual firing line.

Now, you can do something about it. Protect yourself with MOMEDICO. We're the only physician owned professional liability insurance company founded and endorsed by the Missouri State Medical Association. MOMEDICO is a stock insurance company rather than a mutual assessable company. The overwhelming majority of our stock and policy holders are Missouri physicians.

At MOMEDICO we are proud of our reputation for highly trained and totally committed field service representatives. Our reputation for results is outstanding, too. Of all cases handled to conclusion, over 80% were closed without any payment of indemnity. So, if you find yourself on the firing line, MOMEDICO is the company that lines up to protect you.

MOMEDICO. . .the best company a physician can keep.

MOMEDICO

Better Protection. Together.

10795 Watson Road
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

LIBRARY OF MEDICINE
BOSTON, MA

JUN 8 1989

Contents

Missouri Medicine

Editor	Donald G. Sessions, M.D.
Associate Editor	Ramona M. Chapman, M.D.
Editor Emeritus	Jordan W. Burkey, M.D.
Managing Editor	Susan Flanigan Gold
Editorial Assistant	Valerie A. Peters

Editorial Board

Anesthesiology	Mark G. Zukaitis, M.D.
Cardiovascular Surgery	Jack J. Curtis, M.D.
Dermatology	Philip C. Anderson, M.D. John DeSpain, M.D. Ernest Lorenc, M.D.
Emergency Medicine	David M. Trantham, M.D.
Family Practice	William D. Bradshaw, M.D. Carl R. Kruse, M.D. Kirby L. Turner, M.D.
Gastroenterology	Jay P. Marshall, II, M.D.
Hematology	William H. Crosby , M.D.
Internal Medicine	John S. Daniels, M.D. Stephen Hamburger, M.D. Robert K. Skillman, M.D.
Neonatology	Elizabeth J. James, M.D.
Neurosurgery	Keith Rich, M.D.
Obstetrics and Gynecology	James Daly, M.D.
Oncology	Michael C. Perry, M.D.
Ophthalmology	John C. Hagan, III, M.D. F. Thomas Ott, M.D.
Orthopedics	William P. Thorpe, M.D.
Otorhinolaryngology	J. Regan Thomas, M.D.
Pathology	Scott A. Martin, M.D.
Pediatrics	R. Don Blim, M.D.
Physical & Rehabilitation Medicine	Paul E. Kaplan, M.D.
Plastic Surgery	Leroy Young, M.D.
Psychiatry	William F. Clary, M.D. J.C. Corvalan, M.D.
Radiation Therapy	MacDonald B. Logie, M.D.
Radiology	Donald R. Germann, M.D.
General Surgery	Mark S. Cotner, M.D. Richard O. Craig, M.D. Donald Silver, M.D. Michael Metzler, M.D.
Vascular Surgery	Kirt Nichols, M.D.
Urology	George M. Austin, M.D.

Publications Committee

Chairman	Donald G. Sessions, M.D.
Vice-Chairman	Ramona M. Chapman, M.D.
Members	Jack J. Curtis, M.D. John S. Daniels, M.D. Stephen Hamburger, M.D.

Cover

'Monterey Marina' by John Williams Fries, M.D., of St. Louis. This painting demonstrates the wet watercolor technique. Dr. Fries, who has contributed numerous original pieces for the cover of the journal, stepped down as director of Radiology at St. Anthony's Medical Center in St. Louis in October 1988, after 32 years of service. Dr. Fries continues as Clinical Professor of Radiology at St. Louis University. The cover art was photographed by George Wirth Photography.

Guest Editorial

327 **"The Healthy Tan": A Modern Misnomer**
J. Regan Thomas, M.D., *St. Louis, MO*

Special Article

333 **Hospital Antitrust Liability in Dealings With Downstream Providers**
Michael R. Testerman, *Springfield, MO*

Scientific Article

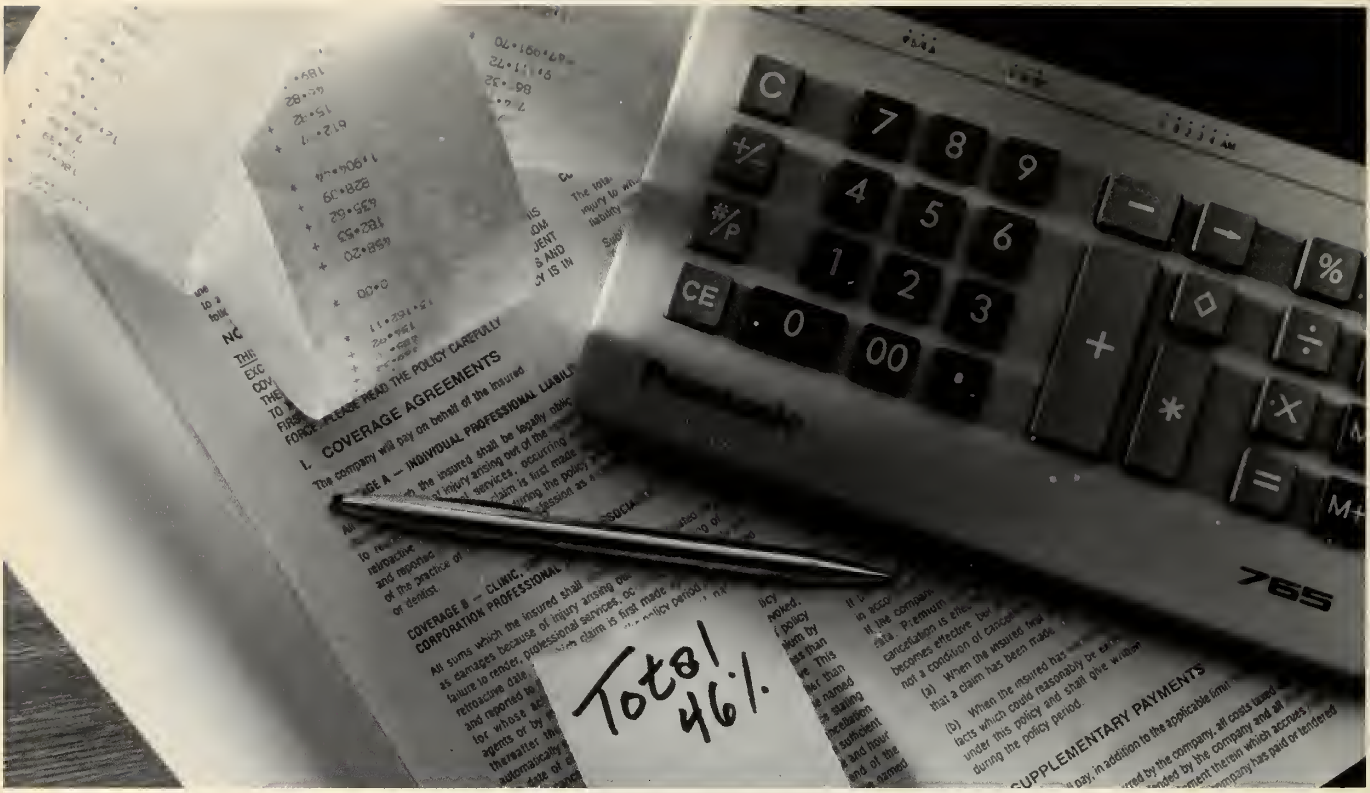
337 **Testing for Drugs of Abuse in Urine**
John Turk, M.D., Ph.D., *St. Louis MO*

Commentary

341 **Urine Testing in Impaired Physicians**
Jack Croughan, M.D., and
Karen Sanders, BSN, RN,
St. Louis, MO

Departments

311 Progress Notes
315 Editor's Desk
321 President's Page
323 Auxiliary Message
325 Practice Management
331 Letters to the Editor
345 CME
348 Physician's Recognition Award
349 New Members
351 Medical School News
353 In Memoriam
359 Classifieds
361 Information for Contributors
361 Advertising Index



Introducing Claims Paid Coverage From Risk Control Associates

Save Up to 46% on Your Premiums with Guaranteed Rates for 3 Years!

Cut Your Liability Insurance Costs Up to 46% With Our NEW Claims Paid Coverage. If you are tired of the high cost of Medical Liability Insurance, now there is something you can do about it. It's called **Claims Paid** coverage, and it can cut your premium costs up to 46%. **And we guarantee a level premium for 3 years if you join now!**

Claims Paid is a bold new concept in medical liability coverage. It offers the benefits of full protection at a fraction of the cost. Risk Control Associates is the only company to offer this innovative plan to the physicians and dentists of Missouri.

Our New Claims Paid Policy is Designed for Maximum Protection at a Much Lower Premium. Risk Control Associates can offer reduced premiums for **Claims Paid** policies because premiums are based on money actually paid out. And **Claims Paid** Insurance is available in the same coverage options as Occurrence and Claims Made policies. If you are currently insured under one of our other policies, you can easily convert your coverage to **Claims Paid.**

Risk Control Associates is a Leader in Innovation and Services. Risk Control Associates is Missouri's leader in the Medical Liability Insurance field. We are owned and managed by physicians, so we know what is important to you. We understand your need for maximum protection and excellent service. And we deliver both. We are "Physicians Helping Physicians."

For more information about our new **Claims Paid** Policy, call for our free brochure, "Understanding Claims Paid Medical Liability Insurance" or ask to speak with a company representative. Our phone number is (800) 422-5122. We will be glad to answer any questions you may have.

You can start saving up to 46% on your insurance premiums right away, **so contact us today.** It will mean significant savings to you and an excellent investment in your future.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS
Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

1111 S. Glenstone • Suite 3-102
Springfield, Missouri 65804
(800) 422-5122 • (417) 862-0650

Missouri Medicine

Vol. 86, No. 6 *Journal of the Missouri Medical Association* June 1989

MSMA PHONE BOOK

Missouri State Medical Association
314/636-5151
American Medical Association
312/645-5000
MSMA Physicians' Health Program
314/768-4990
MOMEDICO
1-800-392-8039
Dodson Insurance Group
1-800-825-3760
MSMA Retirement Plan/ E.F. Hutton
(Call collect) 314/725-9690
Forrest T. Jones
1-800-892-7272
Fred S. James
KC 1-800-892-7105
St. Louis 1-800-445-9513
Health Care Financing Administration
816/426-5233
INTRAV
314/727-0500
Medicaid Provider Relations
1-800-392-0938
Medicare Provider Relations
1-800-392-3070
Medicare Part B Blue Cross Blue Shield
Kansas City
1-800-654-9629
Missouri Department of Health
314/751-6400
Missouri Department of Social Services
314/751-2086
Missouri Patient Care Review Foundation
(Preadmission) 1-800-392-8060
(General info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs
314/751-8042
Missouri State Board of Registration of the Healing Arts
314/751-2334

MSMA Officers

President	Marvin A. Singleton, M.D., *Joplin*
President-Elect	Gary A. Dyer, M.D., *St. Joseph*
Secretary	Norman P. Knowlton, III, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Clarence A. Martin, M.D., *Joplin*
Vice President	Jack Kayes, M.D., *St. Louis*
Vice President	Barbara Buchanan, M.D., *Kansas City*
Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*
Vice-Speaker	James B. Wolfe, M.D., *Springfield*

Councilors

Dorothy D. Reister, M.D., *Shawnee Mission*, Chairman
Carol F. Williams, M.D., *St. Louis*, Vice Chairman

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *Florissant*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Peters*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A.J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Robert T. Gibbons, Jr., M.D., *Overland Park, KS*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Ms. Laura Carlson, medical student, *Kansas City*
Charles Barbee, M.D., *Columbia*
Charlene Prather, M.D., *Kansas City*

Vice Councilors

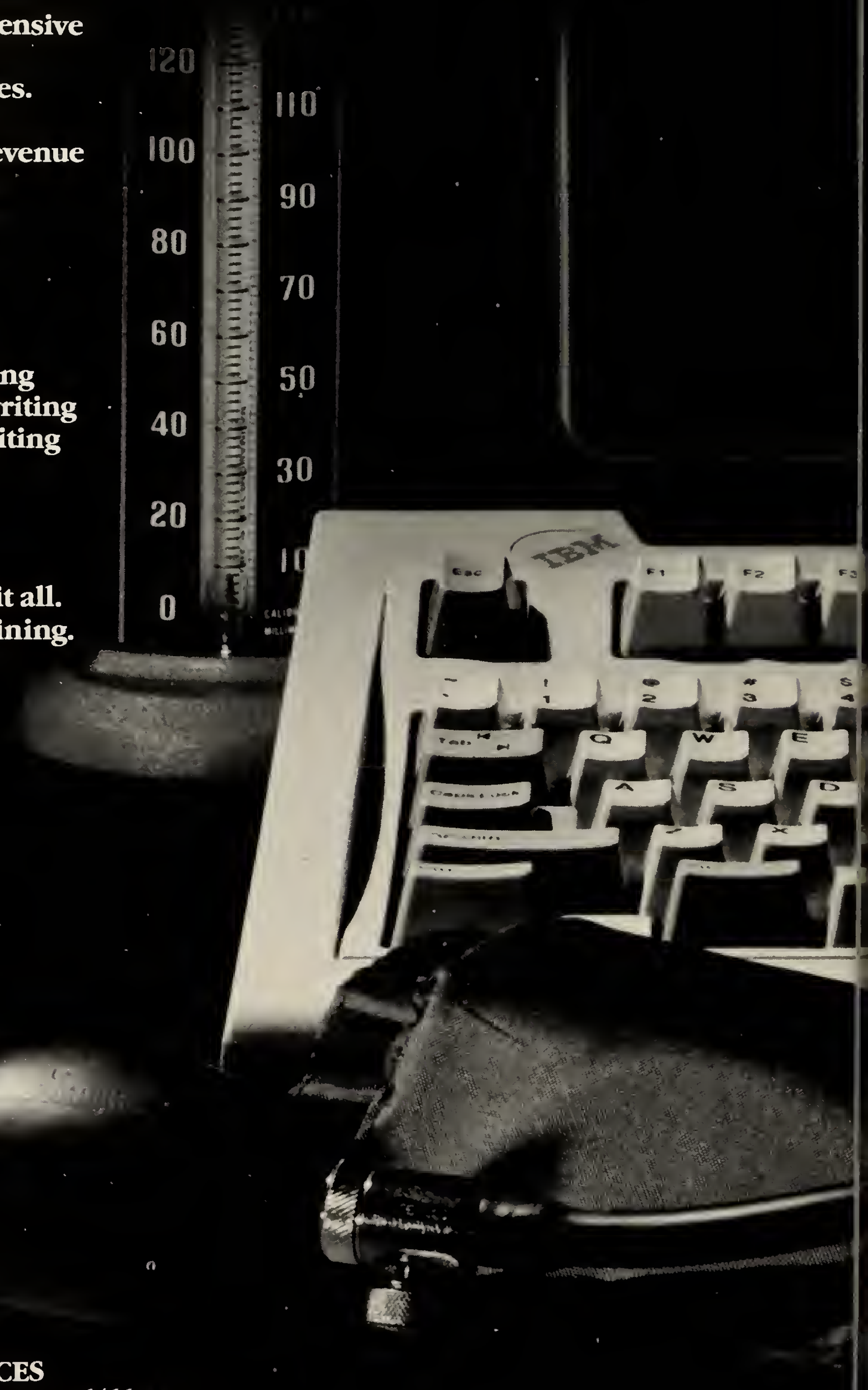
Robert Schaaf, M.D., *Gower*
Carl R. Kruse, M.D., *Palmyra*
Meredith C. Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Jay Yedlin, M.D., *Kansas City*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Ms. Lora Mills, medical student, *Columbia*
Paul Petruska, M.D., *St. Louis*
Carla Siegfried, M.D., *St. Louis*

AMA Delegates

Robert R. MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*
George Bohigian, M.D., *St. Louis*
Melvin C. Kasten, M.D., *Cape Girardeau*
Keith Ashcraft, M.D., *Kansas City*
Vernon Balster, M.D., *St. Louis*
Walter German, M.D., *Springfield*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251
Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.
Subscription rates: $20 per year.
Second class postage paid at Jefferson City, Missouri and at additonal mailing offices.
Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.
Copyright 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.



PRESSURE.

Relieve it. With our comprehensive computer system designed specifically for medical offices.

- Accounts receivable with revenue reporting
- Insurance processing with electronic claims
- Specialized HMO reports
- Comprehensive general accounting
- Collections with letter writing
- Appointments with letter writing
- Patient recall with letter writing
- IBM hardware
- Periodic user seminars
- ...and much more

It's easy because we provide it all. IBM hardware. Software. Training. Ongoing support. PDS. In business since 1973... with more than 100 satisfied customers. PDS. To help you manage your office even better.

PDS

PROFESSIONAL DATA SERVICES
3 Compound Drive • Hutchinson, KS • 316/663-5282
Kansas City • 913/491-3644
Lincoln, NE • 402/476-9322

MSMA Progress Notes

Top medical graduates honored

Annually, MSMA awards $100 to the top graduates of Missouri's medical schools. Three students from each of the four medical schools are selected for their academic excellence throughout their medical education.

At their Honors and Awards Day Convocation on May 5, the Missouri University School of Medicine presented the MSMA Honors Graduate Awards to:

Catherine A. Schnell
Ballwin, MO

Terry J. Elwing
Pierce City, MO

Thomas F. Essman
Springfield, MO

During the Senior Awards Ceremony on May 19, Washington University presented the MSMA awards to:

Catherine A. Hanlon
St. Louis, MO

Anthony Magalski
St. Louis, MO

Steven Zobel
St. Louis, MO

Presented during the University of Missouri-Kansas City's Commencement Ceremony on May 26, the following students received the MSMA award:

David J. Kearney
Anderson, IN

Carla J. Siegfried
Creve Coeur, MO

Raj P. TerKonda
Rolla, MO

At St. Louis University, the following students received the MSMA award on May 19:

Michael P. Donahoe
Sioux Fall, SD

William F. Davis
Venice, CA

James D. Jansen
St. Louis, MO

■

HCFA creates new medical society role

A revised HCFA procedure requiring Medicare carriers to invite state medical associations and appropriate specialty societies to comment on any proposed changes in local medical policy is now in effect.

Seeking such involvement by medical societies was part of a seven-point agreement HCFA made with AMA last January after the AMA had threatened to file suit against the agency. The legal action was considered due to nationwide problems physicians had experienced due to the arbitrary and burdensome practices that Medicare carriers implemented in efforts to comply with new "medical necessity" provisions without having received adequate instructions from HCFA.

Points contained in the agreement were insisted upon by the AMA as a means of significantly improving the carrier review process by making practices fair and equitable to physicians.

■

Errors in ICD-9-CM Third Edition

There have been reports of printer's errors in the ICD-9-CM, Third Edition, printed by the Government Printing Office. One reported error is the duplication of pages 695-724 and the omission of pages 725-756 of Volume 2.

A special contact has been established at the Government Printing Office for replacement of misprinted issues. This contact is only for replacement of misprinted issues, not to check on the status of orders.

Contact Barbara Thomas at 202/275-3073 to replace your misprinted issue of ICD-9-CM, Third Edition.

■

Missouri Register update

MSMA members should review the following final rules and amendments as published in the April 17, 1989 *Missouri Register:*

•Controlled Substances

The Department of Health published as a FINAL RULE 19 CSR 30-1.036, Disposing of Unwanted Controlled Substances. The rule became effective April 27, 1989.

•Medical Student Loan Repayment Program

The Department of Health published FINAL RULE 19 CSR 50-1.030, Medical School Loan Repayment Program. The rule establishes guidelines for implementing the program and allows recipients to reduce their debt by providing services in areas of defined need. The rule became effective April 28, 1989.

•Vaccines

The Department of Health published FINAL RULE 19 CSR 20-28.030, Distribution of Childhood Vaccines. The rule establishes methods and requirements for the distribution of state-funded childhood vaccines to local health departments and private health care providers. The rule becomes effective July 1, 1989.

•Physicians

The State Board of Registration for the Healing Arts published one FINAL RULE and three FINAL AMENDMENTS:

■ 4 CSR 150-1.015, Public Records, establishes guidelines for release of public records by the board.

■ 4 CSR 150-2.004, Post-graduate Training Requirements for Permanent Licensure, clarifies the requirements by defining required post-graduate training and establishes American Specialty Board eligibility as a prerequisite to waiver of the post-graduate training requirements.

■ 4 CSR 150-2.030, Licensing by Reciprocity, clarifies what references are required of applicants; deletes the requirement that the secretary of the state where the applicant for licensure by reciprocity is licensed identify the applicant's photograph; deletes the requirement of proposed residency and inserts a requirement for verification of licensure in other jurisdictions; and clarifies foreign jurisdiction licensure verification requirements.

■ 4 CSR 150-2.150, Minimum Requirements for Reinstatement of Licensure, amends the terminology for editorial and technical clarity.

The rule and amendments became effective May 1, 1989.

•Alcohol and Drug Offender Programs.

The Department of Mental Health published an emergency and proposed amendment to 9 CSR 30-3.710, Definitions (Alcohol and Drug Offender Education Programs). The amendment modifies the definition of alcohol and drug education programs so a driving-while-intoxicated or blood-alcohol-content offender under the age of 21 may be assigned to alcohol and drug education programs.

•Generic Drug Formulary

The State Board of Pharmacy published a PROPOSED AMENDMENT to 4 CSR 220-3.011, Generic Drug Formulary. The amendment would revise the language to enhance substitution procedures and eliminate the need to publish in the *Missouri Register* a list of drugs that cannot be substituted. ■

Medicare seeks MDs comments on proposed policy change

Effective March 10, 1989, comment must be solicited from the medical community when Medicare Part B carriers propose changes to existing medical policy. This is the first such comment that Blue Cross & Blue Shield of Kansas City is requesting as the Medicare Part B contractor for parts of Missouri and Kansas. The comment period is a minimum of 30 days from the date of publication. Comments will be accepted until June 30, 1989. The Blues will disseminate the final policy decision in this format as well as in their normal newsletter publication.

The proposed change is for Percutaneous Transluminal Coronary Angioplasty. The current guidelines are: a) Reimbursement is not based on a global fee. b) CPT code 92982 should be used for single vessel procedures with CPT code 92984 for additional vessels. This does not apply to multiple lesions within the same vessel. Payment will be made appropriately for the type of procedure performed. c) Cardiac catheterizations performed in conjunction with PTCAs will be reimbursed at 50% of the allowable and should be submitted with a "51" modifier. Those catheterizations not performed at the same time will be reimbursed at 100% of the allowable. d) Temporary pacemaker insertions during a PTCA or immediately following a PTCA will not be reimbursed. e) Medical management before and following PTCA will be reimbursed. However, medical management on the day of the PTCA or concurrent care will not be reimbursed. f) Only on PTCA per hospitalization will be reimbursed. g) A second PTCA within 90 days will be reimbursed only when documentation of restenosis of the artery has been received.

The proposed guidelines are: a) Reimbursement for PTCAs will be based on a global fee. Allowables for CPT codes 92982 and 92984 are currently being adjusted to reflect this concept. b) Cardiac catheterization performed in conjunction with the PTCA will be reimbursed at 50% of the allowable. Those catherizations not performed at the same time will be reimbursed at 100% of the allow-

continued on page 342

MISSOURI
DAW
MD
DISPENSE AS WRITTEN

The practice is yours.
The patients are yours.
The prescriptions are yours.

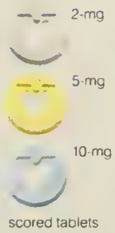
Make the prescribing decision yours, too.

Sign on the right on
the "Dispense as written" line.

Specify VALIUM®
brand of
diazepam/Roche Ⓘⓥ

The cut out "V" design is a registered trademark of Roche Products Inc

The one you know best.


2-mg
5-mg
10-mg
scored tablets

Copyright © 1988 by Roche Products Inc
All rights reserved.

ROCHE Roche Products
Roche Products Inc
Manati, Puerto Rico 00701

Roller-coaster investing won't just take you to dizzying heights.

Roller-coasters are for kids.

Fast climbs and sudden drops are fine for kids on a roller-coaster. But they can be devastating to businesses, organizations and individuals whose investment plans don't provide for risk.

The secret to good choices for prudent investors is finding investments that show good returns over the long haul. Those safe, strong investments do exist. To find them, you need the right information.

United Missouri is *The Information Bank.* Any questions?

Investment Counsel Service
UNITED MISSOURI BANK
Member FDIC
P.O. Box 419226 Kansas City, Missouri 64141-6226 Stuart Murdock (816) 556-7340

ARMY RESERVE MEDICAL PROFILE NO.9

Dr. Holwick outside of hospital where she practices as a civilian traumatologist.

Dr. Holwick in operating room at Letterman Army Medical Center.

JANN L. HOLWICK, M.D.

General and Trauma Surgeon.
Captain, U.S. Army Reserve.

EDUCATION University of Southern California, B.S.; University of California School of Medicine.

RESIDENCY Harbor General Hospital—UCLA Medical Center.

HOSPITAL AFFILIATIONS St. Luke Hospital; Huntington Memorial Hospital, Pasadena, California; Traumatologist, Arcadia Methodist Hospital, Arcadia, California.

OUTSTANDING ACHIEVEMENTS Borden Freshman Prize; Alpha Lambda Delta; Phi Beta Kappa; Phi Kappa Phi; Bovard Award; ALD Award; American Institute of Chemists Medal Award; Summa Cum Laude, University of California; Alpha Omega Alpha.

"When you enter private practice, the only cases seen are usually those limited to your specialty. Serving as a physician in the Army Reserve offers me a departure from my daily routine. I can be involved in virtually anything I choose. If a certain case interests me, I can ask to be part of the surgical team. If I wish to spend time teaching students, I have that option, too.

"As a Reserve physician, I've had the opportunity to interact with different people, from various backgrounds, with assorted medical and social viewpoints. As a result, I've grown as a physician and as a person.

"I spent six months looking into the Army Reserve program before I joined, wanting to make sure that my skill and time would be put to good use. I've been a Reservist three years now, and I still find it extremely rewarding. I have the satisfaction of knowing that I'm serving my country."

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**

AXID®

nizatidine

Enhances compliance and convenience

Patients appreciate Axid, 300 mg, in the Convenience Pak

In a Convenience Pak survey (N = 100)[1]

- *100% said the directions on the Convenience Pak were clear and easy to understand*
- *93% reported not missing any doses*

Pharmacists save time – at no extra cost

- *The Convenience Pak saves dispensing time and minimizes handling*

The Convenience Pak promotes patient counseling

- *Pharmacists dispensing the Axid Convenience Pak can encourage compliance and continued customer satisfaction*

Lilly
Once nightly
Convenience Pak
AXID
nizatidine capsules
300 mg
Once nightly
Convenience Pak
AXID
nizatidine capsules
150 mg

Convenience Pak is available at no extra cost

Lilly

Eli Lilly and Company
Indianapolis, Indiana
46285

AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General* – 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests – False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions – No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy – Teratogenic Effects – Pregnancy Category C – Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers – Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use – Safety and effectiveness in children have not been established.

Use in Elderly Patients – Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic – Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS – Rare cases of reversible mental confusion have been reported.

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic – Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental – Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity – As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms – There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment – To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

---

1. Data on file, Lilly Research Laboratories.

NZ-2907-B-949310

© 1989, ELI LILLY AND COMPANY

EDITOR'S DESK

by Matthew A. Budd, M.D.
Guest Editor
Harvard Medical School

Editor's Note: *In seeing patients many of us have had the thought that "this patient is in the wrong office". This conversation could have its origin in a feeling that something was missing in our schooling and in our training. Currently physicians are looking at ways to teach us the distinctions that might create more powerful and effective relationships with our patients. My guest editor for June, Dr. Matthew Budd, a practicing internist, teaches second year students at Harvard Medical School.*

Listening to Patients

Do you recall the moment when you first listened to a human heart in medical school? I remember being puzzled by the unintelligible rumbling of sound. Although I had spent the preceding night studying the textbook descriptions of heart sounds, I could not connect those words with what I was hearing. Then, a senior resident came by and asked if I had heard the "classic mitral stenosis murmur". I hid my embarrassment as I said "no". I did not tell him that what I had heard sounded more like a freight train than a heart.

Later, an instructor accompanied me to the bedside where he demonstrated the distinctions that I had read in the textbook. He used sketches to show relationship, timing and intensity; he used analogy to show quality; he used oral sounds and the tapping of his fingers to show sequences and rhythm. Each time I returned to listen to the patient's heart following a moment of demonstration by the instructor, I heard more; the rumblings began to clarify. With practice, patience, and repeated coaching I gradually became competent at listening to a heart.

I make an analogy between the process of learning to listen to heart sounds, and learning to listen to patients. Both activities are dependent upon developing competence in observation. In both activities competence in observation is related to mastering certain basic distinctions relevant to the area of concern: heart sounds, or visits with patients. The present difficulties in the doctor patient relationship may reflect our lack of sufficient distinctions for observation in this critical area of concern. Here, I will cite two arguments that suggest that we are insufficiently competent in listening to patients, and then I will propose several distinctions which could support increased effectiveness in this domain.

The first piece of evidence for difficulty in the relationship is the observation that, even though approximately 50% of patients who come to doctors present with symptoms that reflect anxiety or depression, these underlying emotional states are not recognized and addressed a majority of the time. This failure to attend to the "true" problem is associated with ineffective treatment, excessive testing, and frustration for both the patient and the physician.

The second piece of evidence is the diminishing public respect for physicians and the startling rise in malpractice actions. I suspect that at least part of the problem here results from our inability to coordinate patient expectations with our actions and limitations. When patients expect an outcome that we do not deliver, resentment and distrust result. This may precipitate a malpractice complaint.

The problem is not that we are callous in the first instance, or deceitful in the second. The opposite is true — we want trusting and effective relationships with our patients. The problem is analogous to our difficulty in listening to heart sounds. We lack certain basic distinctions for taking effective action, in this case for building trust and for listening to and coaching patients. I shall make four distinctions that can serve as a basis for future learning in our practices. I call these distinc-

continued on page 316

continued from page 315

tions the "4 C's of Listening": Curing, Caring, Coordinating, and Coaching.

Curing

In this area we ask standard medical questions and do standard examination procedures so that we can arrive at a diagnosis and a corresponding treatment plan. Our questions and action here follow from our understanding of basic medical science. However, we should remember that even though our inquiry is clear and scientific to us, the patient sees the problem with different eyes. The patient's responses to our questions must be heard by us as reflecting the world of the patient, even though we must make scientific conclusions.

Caring

In this area we inquire into the life concerns of the patient and assess how these concerns are impacted by the illness, or how difficulties in daily living might manifest in bodily symptoms or deceases. Our questions here are drawn from our knowledge of cultures, life stages, history . . . from our own humanity, and from our study of humanities. In this area we ask questions like: "Are you angry about your illness?" "What is your explanation about why you are ill?" "What do you fear having to give up as a result of this illness?"

We do not need to process the responses to such questions. We can listen without acting. When we do this, patients sometimes say that we "care" or are "empathetic."

Coordinating.

In this area our focus is on building coordinated and satisfying action between us and our patients in which the mutual assessment of trust can develop. "Tell me what you understand will happen when you take your medicine?" "Do you know when to contact me and how to do this?" "Do you know how I will inform you of your test results?" "Do you understand that my diagnosis is not a certainty but my careful judgement, and that you and I together will evaluate the results of the actions we take and plan our next steps?" Making clear promises to patients which we in fact keep, and indicating clearly the limits of what we can promise, helps to build trust.

Coaching

In this area of care we join with the patient in identifying and questioning some of the basic assumptions that he or she makes to explain difficulties of living. To enter into a discussion of this nature requires that we have a background relationship of mutual trust. I shall illustrate this kind of conversation:

Charles is a 45-year-old manager of a city department. He came to my office complaining of palpitations, which he attributed to a "stressful" job. I conducted a "standard" interview relative to possible cardiac diseases (curing). Then I asked him about his concerns in life, and the effects of his symptoms and his stories about his symptoms on his life . . . i.e. what were his fears? (caring). Then I turned my questioning to the "causal hypothesis" (i.e. the stressful job) that he had made to explain his symptoms. Generally when someone says that something is "stressful" we assume that he is naming an independent reality, rather than making a judgement based on his own criteria. This standard interpretation may well be faulty since the same job may be seen as "joyful" by one person and "stressful" by another. Knowing this, I asked Charles about what actually happens at work when he says that "stress" is present. He answered, "Well, I report to three commissioners, and they give me different orders." Later he added, "I try to please them all, but I cannot."

Now, Charles and I could have a different discussion. Before, the options to him were to quit his job, or to control the manifestations of his "stress". Now, new questions and new actions were possible. "What could you ask of the three commissioners that would clarify their requests of you?" "What would happen if you said 'no' to certain requests?" "Why do you not do this?" "What is the consequence of not being able to say 'no' for your dignity and self respect? For your health?" So, even as Charles and I were doing standard medical actions, we were also in a conversation in which he began to examine his life and his job. We were asking questions that could lead to enhanced self respect, and possibly also less "stress.""

I call this aspect of our visit a coaching conversation. It is an interaction in the course of which the patient may question certain limiting assumptions and explore new actions. When I am acting in this mode I ask questions like: "What is actually happening that anyone could see when you make the judgement that "X" is present?" "Could someone else looking at the same actions make another judgement?" "How could you get what you want without changing any of the circumstances?"

These are the "4 C's of Listening": distinctions to guide our observation of and our interaction with patients. At an earlier time we learned the elements for listening to hearts, practiced them, and became capable of a new action-cardiac diagnosis. Now I make the invitation to you to observe your visits with patients in the areas of curing, caring, coordinating, and coaching. I predict that new questions about what you do and new actions will appear for you that have relevance to the crucial areas of empathy, trust, and effectiveness.

continued on page 328

"I switched to occurrence coverage without paying for a tail."

The Claims Made Trap. If you're caught in it, there's no easy way out. The only way to switch to occurrence, the coverage preferred by most doctors, has been to pay an expensive tail premium. Until now.

Medical Protective, the company that invented professional liability insurance 90 years ago, has a solution. Convertible Claims Made. Now you can get back to occurrence without buying a tail.

And when you choose Convertible Claims Made with Medical Protective, you not only get back on the road to occurrence, you get coverage with one of the most trusted and highly regarded professional liability carriers in America today. For the past 90 years, defending and insuring physicians, surgeons and dentists has been our only business. No one is more experienced or more committed. And our continuous A+ (Superior) rating from the A.M. Best Co. gives you the financial stability and strength that you need and expect from your professional liability carrier.

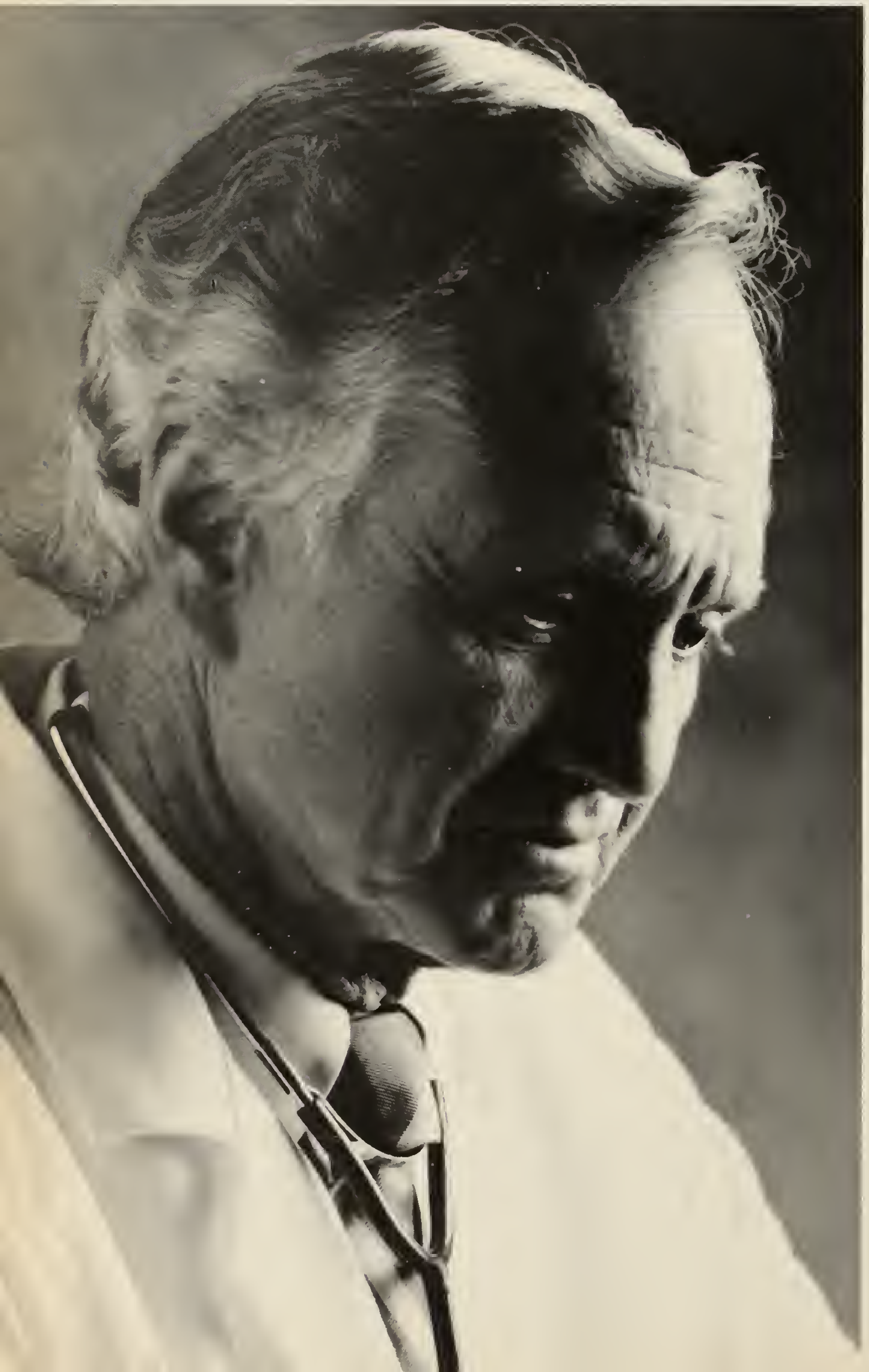
So, if you would like to escape the Claims Made Trap, look no further. Call us today and we'll show you how Convertible Claims Made makes it easy to step up to occurrence and Medical Protective.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

No Need to Feel Helpless...



Few things elicit feelings of depression, rage, helplessness and exasperation as thoroughly as receiving suit papers for a malpractice claim. This physician suffered just such an unpleasant experience... but his odds of winning were better than most. Why? Because his professional liability insurance carrier is Insurance Corporation of America.

The circumstances of this claim could occur and have occurred in operating rooms and doctors' offices everywhere. A routine surgical procedure went sour when, for no apparent reason, the patient suffered a cardiac arrest. Prompt and proper attempts at resuscitation failed. Our physician was sued along with other

surgeons in the operating room, the primary care physician, the anesthesiologist and the hospital.

Subsequent to surgery, it was determined the patient had arrested as a result of an allergic reaction to the anesthesia. Unlike other carriers involved, who settled quickly to avoid costly "death incident" litigation, ICA recognized our physician was not at fault. Fortunately for him, ICA is dedicated to the strongest claims defense possible. And because ICA also understands that a doctor's most valuable asset is his reputation, protecting it becomes *our* bottom line.

So ICA and the doctor fought alone — and at ICA's expense. ICA in-house attorneys screened and selected local defense attorneys skilled in malpractice cases and familiar with the judicial climate of the region. Then, they planned strategy, investigated the facts, and monitored the defense.

During discovery, information was released indicating the patient had previously undergone similar surgery under anesthesia *without* incident. Because of ICA's diligence and our willingness to exhaust all legal remedies, the jury was allowed to hear the autopsy report as well as the patient's past medical history. Those defendants who settled quickly never had an opportunity to present that evidence. And ultimately our insured was exonerated.

What does this mean to the doctor? He leaves the courtroom with his reputation, his policy limits and his checkbook intact, all because of his partnership with ICA, where we put reputation, principles and dignity ahead of the quick fix. The reason why? Because ICA is people who *care*. Period.

ICA **People Who Care**

INSURANCE CORPORATION OF AMERICA

Houston, Texas 713 (871-8100)

Medical Coverage Exclusively For Medical Professionals & Their Employees

That says it all. The MSMA $1,000,000 Major Medical Plan is specifically designed to meet the needs of today's physician . . .

- $1,000,000 lifetime maximum
- Your choice of $200, $500 or $1,000 deductible
- Coverage for a lifetime
- Affordable group rates

Most doctors don't need expensive "first dollar" medical coverage. But when those hospital costs start adding up, you do need to be sure you have a solid plan that stands behind you and your family.

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

Insured by:
The Mutual Life Insurance
of New York

CALL NOW!

National:
800-821-7303

Missouri:
800-892-7272

Kansas City:
816-756-1060

ASK FOR JAN PACEY

Clip the coupon and send it in for a free brochure.
MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on the MSMA $1,000,000 Major Medical Plan.

Name ______________________________

Address ______________________________

City ______________________________

State ____________________ Zip ____________

President's Page

by Marvin A. Singleton, M.D.
MSMA President

> *We must emphasize the good in the profession of medicine and those who practice by being a role model for the youth and a leader in our community and community service.*

Dr. Jekyll and Mr. Hyde

Since Robert Lewis Stevenson first gave us "The Strange Case of Dr. Jekyll and Mr. Hyde" in 1886, it has represented the case of a split personality, one side of which is good and the other side evil. One might think of the medical profession in nearly the same light in the present day. Most of the medical profession are hard working, industrious, and caring, individuals who went into the practice and profession of medicine for only the good reasons. The perception by the public however, reveals our other side or that of Mr. Hyde when the public or media refers to the price gouging, money hungry doctors. In this case study we must look at the reasons behind these misconceptions and determine the course of action of which type of individual do we want to be known as and perceived by the public.

Most of the practicing physicians in this country are exemplified by Dr. Jekyll, hard working pillars of the community with diligence and only the best interest of the patients at heart, when in fact many physicians go far beyond this characterization. A good example is our recent Citizenship Award recipient, Dr. Warrren Lovinger of Nevada, who has participated in his community, his church, and social service activities of his area. Other physicians across the state are participating in scouts, schools, PTO's, churches, serve as uncompensated physicians to a variety of sporting events and teams, as well as serving on School Boards, as elected officials of counties and cities, and the General Assembly.

In the Presidential Address that I gave in St. Louis upon becoming your President, I have called on the Missouri State Medical Association to make some positive efforts towards emphasizing the good side of physicians and their spouses by: 1) calling for the establishment of an Ombudsman Program, 2) calling on through component societies an active ongoing industrial visitation program and 3) calling upon all members of the Missouri State Medical Association to give a "tithe of time."

I am additionally calling upon the Missouri State Medical Association to actively promote and publicize physicians and their families who have done exemplary service to their fellow mankind through service projects, participation in their community, on a monthly basis and possibly culminating into recognition as the Citizen of the Year among our physicians and families statewide. This would generate more favorable publicity through the media as well as a recognition of their individual actions on behalf of their fellow man.

If we gave as much time to our community as we give to the hospitals, there would be no doubt in my mind the public perception would change from one of Mr. Hyde to one of Dr. Jekyll. We must emphasize the good in the profession of medicine and those who practice by being a role model for the youth and a leader in our community and community service. Stand up and be heard and recognized for what we are, Dr. Jekyll, and not through inaction and poor publicity relegated to Mr. Hyde.

Integrity.
Yours, and
Ours.

Financial soundness.
Yours, and
Ours.

The future.
Yours, and
Ours.

Medical Defense
Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MEDICAL PROFESSIONAL LIABILITY INSURANCE

Auxiliary Message

by Pattye Barbee
MSMAA President

As we enjoy the summer, we can do some positive things for ourselves and for medicine.

Enjoying Summertime

In Every Job that Must be Done,
There is an Element of Fun;
Find the Fun . . .

Summertime is fun. Graduations, picnics, proms, and award ceremonies signal the end of another school year, and our summertime attitude settles in. Relax, reflect, rejuvenate. We need these breaks — time to renew our minds and bodies, time to spend with our families, time to have fun.

As we enjoy the summer, we can do some positive things for ourselves and for medicine. The key is to keep it easy, keep it simple, make it fun.

HEALTH — Good health begins at home. We take care of ourselves so that we can take care of others. Summertime is an excellent time to renew our motivation for fitness through exercise and a healthy diet. We all want to look good, what with shorts, swimwear and reunions! We certainly know what we are supposed to do. So why not?

1. Be realistic. Set goals that can be reached and maintained. 2. Be flexible. Choose an activity and a time that suits your personality; the highly recommended walk is excellent. 3. Be committed. Studies show that sedentary people have as much free time as active people. 4. Get support. Involve your spouse and family, if possible. 5. Watch your diet. Cut the saturated fat and take advantage of fresh fruits and vegetables — there is a good diet beyond oat bran.

LEGISLATION — Most legislators are home during the summer, and it is a good time to visit with them. Not to lobby or pressure — just to let them know you are interested in them.

1. Invite them to lunch. 2. Have a small gathering of physicians and spouses and invite them. 3. Invite them to spend a day with the physician; it is an excellent way for the legislators to understand the reality of medicine's concerns. 4. Be understanding of the legislators' jobs too. Thank them for supporting your point of view. Contributions are welcome any season.

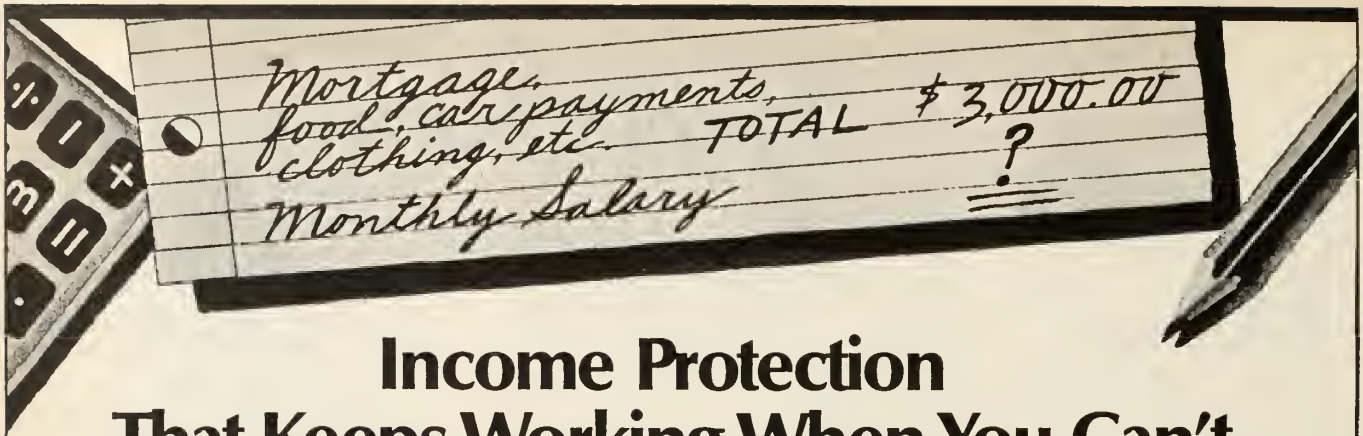
MEMBERSHIP — Most new physicians move into communities in the summer months. Physicians need to be involved in membership recruitment, as well as the spouse. New physicians do not sneak into town and a friendly gesture from an individual early on will make them more receptive to a formal invitation from the organization in the fall. One-to-one recruitment is still the most effective, and it can be done any time — the sooner, the friendlier, the better.

AMA-ERF and MSMF — Fundraising may be difficult to organize in the summertime, but in some communities it may work well. Outdoor parties, progressive dinners, tennis and/or golf tournaments, marathons, house and garden tours, and garage sales are popular summer events.

Many of the objectives of the Auxiliary and of the Association can be carried through the summer with a minimum of organization.

Find the fun, and snap!
The job's a game.

Have a fun, healthy, productive summer. ■


Mortgage, food, car payments, clothing, etc. TOTAL $3,000.00
Monthly Salary ?

Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance programs offer you coverage and cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: **James**

FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

- ☐ Personal Disability Income
- ☐ Office Overhead Expense
- ☐ Hospital Indemnity Plan
- ☐ Accidental Death & Dismemberment Insurance

Name ____________________

Address ____________________

City __________ State __________ ZIP __________

Phone: ( ) __________ Best time to call: __________

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

Although your name will not be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.

Dear Dr. Woerth:

In your last column you wrote that V codes should be used in place of "rule-out's" for Medicare billing. What are V codes and where can they be found?

L.G., Office Manager

Dear L.G.:

V codes are supplemental codes to the ICD-9-CM, the listing of diagnostic codes now required for Medicare claims. The codes are found on pages 880-929 of Volume I and are indexed, as are other diagnostic codes, via Volume 2 of ICD-9-CM. They are used when 1) a person is not currently sick but seeks health care for a specific purpose, i.e. routine examinations, for prophylactic vaccinations, to be a donor, etc., or when 2) a problem or circumstance is present that influences a person's health status.

V codes include codes for personal or family history of disease. These should be coded when they influence the physician's treatment of the patient. For example, if a patient sought medical treatment for stomach pain with a history of stomach cancer, he would most likely be treated differently than a patient with the same stomach pain but no history of stomach cancer. The addition of the history of stomach cancer establishes medical necessity for the differential treatment given the two patients.

There are a series of V codes (V73-V82) which are screening examination codes. These include screening for malignant neoplasms, thyroid disorders, diabetes, anemia and glaucoma, just to name a few. These screening codes are helpful in coding for "rule-out."

Please Note: It may be beneficial to take an ICD-9-CM coding course to learn more about V codes, E codes and the conventions for correctly using all diagnostic codes. If these codes are not appropriately used on Medicare claims starting June 1, claims will be returned. This will result in a slow-down of payment and could result in lost revenues.

■

Where we are, where we're going . . . Challenging AIDS in the 1990s

October 19-20
1989

Allis Plaza Hotel
Kansas City, MO

Sponsors:

Missouri Department of Health, Bureau of AIDS Prevention

Kansas City, Missouri Health Department AIDS Program

Metropolitan St. Louis AIDS Program

Midwest AIDS Training Education Center (MATEC)

For Information: (314) 882-4106

GUEST EDITORIAL

by J. Regan Thomas, M.D.

"The Healthy Tan": A Modern Misnomer

With the sunshine season now in full swing, it is imperative that physicians warn their patients about the inherent risks of ultraviolet light exposure, both from the sun, as well as from artificial sources.

As a strong proponent of physical fitness and outdoor recreation, I would be one of the last to recommend that our population stay indoors and avoid outdoor activities. However, caution is warranted when it comes to the amount of sun exposure experienced and unfortunately, this is often overlooked. It is ironic that, at a time when we recognize skin malignancy to be the most prevalent type of cancer, our population is going to extreme and irrational lengths to expose their skin to ultraviolet light in a quest for the "healthy tan." With the sunshine season now in full swing in our community, it is imperative that physicians warn their patients about the inherent risks of ultraviolet light exposure, both from the sun, as well as from artificial sources.

It is well established that chronic exposure to the sun results in many of the changes normally attributed to aging. Indeed, most of the skin changes that we tend to associate with aging occur more dramatically in sun exposed areas of the face, neck, arms, and hands. Likewise, the harmful effects of ultraviolet radiation are a primary determinant in the development of skin cancer. Many of the effects are long term and cumulative with the exposure in childhood being as important as the exposure in adult life. Our patients must be made to realize that too much exposure to sunshine may have a dramatic impact on their health twenty, thirty, or forty years later.

The recent notoriety and subsequent popularity of the drug Retin-A to replenish and rejuvenate the skin following "photo-aging" has given many individuals a false sense of security about their ultraviolet light exposure. Most patients are likely to become disenchanted with the use of Retin-A for cosmetic use after experiencing some of its potential side effects, its slow response, and its lack of overall rejuvenating effect. Certainly, prevention of photo-aging is preferable to later attempts at restoration of damaged and prematurely aged skin. Even if some of the photo-aging changes of the skin can potentially be improved, the risk of skin cancer from sun exposure is still a significant one. Those of us who are involved in the treatment of skin cancer are unfortunately seeing progressively younger patients with skin malignancies.

Photosensitive reactions are more prevalent in the summer as ultraviolet light exposure increases. This includes a variety of drugs which may be associated with photosensitive reactions, including a number of antibiotics, tranquilizers, diuretics, antihistamines, and antipsychotic. Even Retin-A may cause a photosensitive reaction and its use should be combined with the avoidance of excessive ultraviolet light and sunshine exposure, combined with sun blockers during outdoor activities.

An occasional argument suggests exposure to sunlight is required for formation of vitamin D in the body (by activation of 7-dehydrocholesterol within the skin). However, in the typical American diet with fortified foods containing

continued on page 328

Guest Editorial

contined from page 327

synthetic vitamin D such as milk or in multiple vitamins, this is not a requirement. Indeed, even in those individuals who were not receiving foods fortified with synthetic vitamin D only 20-30 minutes of daylight exposure would be required to promote the formation of adequate amounts of this vitamin. Most people can accumulate this amount in the course of their daily activities such as going to the automobile from the home and work, brief outdoor exposures, etc. There is certainly no need to spend hours in direct, constant sunlight exposure.

Tanning salons continue to grow in popularity and have developed into a major industry. They were infrequently available even a decade ago. Now there seems to be at least one in every shopping center. Nearly every health and fitness facility also contains some type of tanning apparatus and a number of hair salons likewise offer tanning facilities.

Ultraviolet light can be divided into several bands which include long wavelengths UVA, medium wave lengths, UVB, and short wave lengths, UNC. Early tanning salons used light sources that emitted UVB which were, at that time, the so-called "tanning rays." Fairly strong campaigns about the use of UVBs increased the awareness of the risks of UVB irradiation with particular emphasis on the risk of skin cancer. As a result, most of the newer tanning devices in salons began to filter out the UVB using only long wave UVA light sources. These, unfortunately, have been advertised and presented to the public as being safe UV irradiation. It's been shown that this is incorrect and, indeed, UVA irradiation is also dangerous. UVAs longer wave lengths imply deeper transmission through the epidermis into deeper dermal layers making connective tissue perhaps even more vulnerable. UVA has been shown to be carcinogenic in animals and is capable of producing blood vessel damage. The harmful effects of UV irradiation potentially include exacerbation of existing skin damage caused by previous exposure of sources of UV irradiation. Likewise, "light sensitive" skin disorders such as some types of herpes may be exacerbated by artificial UV sources in addition to potential photosensitive reactions as noted above. It appears that the high intensity long wave irradiation from UVA with its deeper penetration, may cause damage to the immune system through damage to Langerhans cells which are essential for proper physiologic response to antigens in the epidermis. It also appears that eye damage is potentially at risk through UVA light and that cataract formation could be the result. In a recent public statement on tanning lights by the American Cancer Society, Missouri Division, it was stated: "There is every reason to believe that additional exposure to ultraviolet A tanning booths will add to the damaging affects of the sun's exposure."

Most of our patients can continue their outdoor activities without interruption, and yet still protect themselves from many of the harmful affects of ultraviolet rays. Most important is the utilization of high SPF level sunscreens which are available in a variety of carrier agents, fragrances, and prices. Remembering to reapply this through the day while being exposed to the sunshine is of key importance and those which are water resistent are helpful. Wearing a good hat and protective clothing, especially for those with more sensitive, pale skin, is good common sense. Finally, the ultraviolet exposure is greatest during the mid-portion of the day from 10:00 a.m. until 2:00 p.m. (when the sun's rays pass through less ozone). If our patients try to utilize the early morning or late afternoon and evening for outdoor activities, they are going to have much less exposure to these damaging rays. Patients who continue to frequent tanning salons for a sense of cosmetically enhanced appearance through use of UVA lights are putting themselves at additional risk. While to many a suntan may suggest health, the opposite is the unfortunate truth. Particularly younger patients should be aware that damage from ultraviolet light is cumulative and will continue long after the skin has lost its temporary suntan appearance. Today's so-called "healthy tan" may potentially have some very unhealthy effects in the future.

Reprinted with permission of St. Louis Medicine, Volume 10, Number 6, pp. 203-205. June 1988. Editor's Note: Dr. Thomas is assistant professor of otolaryngology at Washington University School of Medicine in St. Louis and a member of the Editorial Board.

Editor's Desk

continued from page 316

For readers interested in the theoretical background for this paper the following references are suggested:

1. *Understanding Computers and Cognition.* Terry Winograd and Fernando Flores. Ablex, Norwood, NJ, 1986.

2. *The Tree of Knowledge.* Humberto R. Maturana, and Francisco Varela. New Science Library, Boston, 1987.

3. *The Primacy of Caring.* Patricia Benner and Judith Wrubel. Addison Wesley, New York, 1989.

Please direct inquiries or comments to: 1611 Cambridge St., Cambrige, Mass. 02138.

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine,. though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

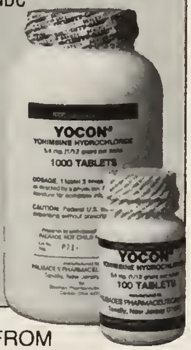
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan Oecember Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES
PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

The Dodson Dividend Plan

A program for workers' compensation insurance that gives you the opportunity to earn a dividend at the end of your policy year, depending on claim experience.

Our Plan has been approved by the Missouri State Medical Association since 1983.

Insured MSMA members have received dividends as high as **35%**. Returns of premium now average **16.22%** per year.

With returns like these, shouldn't you insure with Dodson, too?

1-800-825-3760
Ext. 2990

underwritten by
Casualty Reciprocal
Exchange, member

DODSON GROUP
9201 State Line Road
Kansas City, MO 64114

PASSIVE SMOKING

Although I'm only two years old,
For eighteen months, I've had a cold
My eyes are red and I've been sneezing
Each time I exhale, I start wheezing.

My brother, age twelve, smokes cigars
My sister frequents smoke-filled bars
My daddy smokes and so does mom . . .
I'm sitting on a real time-bomb.

Would you believe it, two years old
And I'm a smoker, so I'm told!
I've never smoked and yet I'm choking
That's what they mean by "passive smoking."

At my age, I'm not constituted
To inhale air that's so polluted.
And, though I'm just a little shaver,
The odds soon won't be in my favor.

I can't complain — I'm not yet literate—
But you'd think they'd be more considerate.
I'm awfully young to be so cynical
But my lungs will soon be nicotinical.

The truth is, I just sit here idle
While the entire clan is suicidal.
. . . But, gee whiz, I've done nothing wrong
Why should they take me along?

— Benjamin Milder
St. Louis, Missouri

Author's Note: *A National Research Council committee reported that youngsters whose parents smoke suffer increased health risks — wheezing, coughing and sputum production — and are hospitalized more frequently for respiratory ailments than children of non-smoking parents.* **Editor's Note:** *Dr. Milder is an ophthalmologist in St. Louis.*

NOTICE TO POLICYHOLDERS, CLAIMANTS AND CREDITORS OF

EMPIRE CASUALTY COMPANY

OPPORTUNITY TO FILE CLAIMS

NOTICE IS HEREBY GIVEN that Empire Casualty Company, organized under the laws of the State of Colorado, with corporate offices in Ada, Oklahoma and Denver, Colorado has been placed in receivership by Order of the District Court in and for the City and County of Denver, Colorado.

Pursuant to the authority vested in the Receiver, all policyholders, claimants and creditors of Empire Casualty Company are hereby given the opportunity to file notice and proof of claim with the Receiver of Empire Casualty Company.

Notice and proof of claim must be addressed and postmarked to the Receiver at his address by midnight, September 30, 1989. NO LIABILITY, INDEMNITY, OR CLAIM KNOWN OR UNKNOWN, WILL BE CONSIDERED IN THE RECEIVERSHIP UNLESS SUCH BECOMES KNOWN AND REPORTED TO THE RECEIVER ON OR BEFORE THE CLAIM FILING DEADLINE.

Claim forms are available from, and must be filed with, Robert D. Balzano, Receiver, Empire Casualty Company, 333 W. Colfax Avenue, Suite 515, Denver, Colorado, 80204.

Claims allowed by the Receiver will share in the distribution of assets of this company according to section 10-3-507 (3) Colorado Revised Statutes. Claimants will receive notice of allowance or disallowance of their claim and its priority classification by the Receiver.

PERSONS WITH MALPRACTICE OR PROFESSIONAL LIABILITY INSURANCE WRITTEN ON AN OCCURRENCE CONTRACT MUST OBTAIN RUN-OFF OR "TAIL" COVERAGE FROM ANOTHER INSURER OR RISK PERSONAL LIABILITY FOR INCURRED BUT UNKNOWN CLAIMS. CONSULT AN INSURANCE COMPANY OR AGENT ABOUT THIS COVERAGE.

Letters to the Editor

Thanks MSMA

Dear Dr. Sessions and MSMA:

I want to take this opportunity to thank you for the honor you bestowed on me Friday afternoon (April 14, 1989) in St. Louis. The award was very impressive and I will continue to work with your association to improve medical care for the Citizens of Missouri.

Again, I truly appreciate this honor.

Sincerely,

Al Nilges
State Representative
District 109

■

Thanks Again

Dear Dr. Sessions and MSMA:

On behalf of the University of Missouri-Kansas City School of Medicine, I want to extend my appreciation to you and to members of the Missouri State Medical Association for their generosity in providing funds to our medical school through contributions to AMA-ERF. Our check this year in the amount of $7,294.64 for unrestricted funds and $1,918.40 in restricted funds was greatly appreciated, particularly in this time of limited financial resources. A medical school such as ours, which is less heavily endowed than some of the more established medical schools, can benefit greatly by this type of philanthropic support.

We appreciate the interest of the medical community of Missouri in our School of Medicine. We feel particularly involved in the state at this time with our students coming from all portions of Missouri. We have received applicants to our School of Medicine from all of the 114 counties plus the city of St. Louis since the School opened. We have utilized the AMA-ERF funds to support a variety of student efforts, including emergency loans, attendance at state and local meetings of organized medicine, and for support of certain student projects. We do appreciate the flexibility given by the AMA-ERF funds in allowing us some discretion in this regard.

Again, please express my appreciation to the Missouri State Medical Association and its members for their generosity. We look forward to a continued pleasant association with organized medicine.

Sincerely yours,

James J. Mongan, M.D.
Dean
UMKC School of Medicine

■

More Appreciation

Dear Dr. Sessions and MSMA:

On behalf of the Kirksville College of Osteopathic Medicine, thank you and the American Medical Association/Education and Research Foundation for the contribution to our college in the amount of $325. Please share our appreciation with the alumni of the Kirksville College of Osteopathic Medicine for their generous donations made in the name of their alma mater.

Sincerely,

Sydney P. Ross, D.O., F.A.C.O.S.
Vice President for Academic Affairs and Acting Dean
Kirksville College of Osteopathic Medicine

■

What's up, Doc?

You practice medicine, read our journal, and have an opinion. We want your voice to be heard! Send your comments to:

Letters to the Editor
P.O. Box 1028
Jefferson City, MO
65102

You didn't spend umpteen years in school in order to become a bill collector.

There's one critical procedure you're not adequately prepared to perform: inducing a flow of cash from slow-paying patients. Besides, you have far better ways to spend your time.

Which is why we suggest you engage the services of I.C. System.

First of all, we have the expertise and resources to do the job. What's more, we understand that we're dealing with *your* patients. You don't want to alienate or offend them. And we conduct ourselves accordingly.

In fact, our work is endorsed by over 1,200 professional associations and societies, including your own. And although we're headquartered in St. Paul, Minnesota, we have communication centers in every state of the union.

We'll assign a local I.C. representative to your account who will be supported by a full range of collection services and personnel, including carefully-trained telephone contact specialists. We'll even provide training on how to use our service for the person(s) in your office handling accounts receivable.

But most important, we *guarantee* results. Our fee structure combines a very competitive commission rate with a retainer (corporate or standard) scaled to your needs. And we guarantee to keep collecting for as long as it takes to recover *at least ten times the amount of that retainer.*

To find out how the I.C. System approach can work for you, call toll free (800) 443-4123, ext. 621. In Minnesota, call (612) 483-8201, ext. 621. Or return the coupon.

I.C. System®
The System Works.™

I want to recover the money that's owed me. Please provide me with information on the I.C. System approach.

Name____________________
Title____________________
Firm____________________
Address____________________
City____________________
State__________ Zip__________
Telephone number____________________

3385-1

Mail to: I.C. System, Inc.
444 East Highway 96, P.O. Box 64639
St. Paul, Minnesota 55164-0639

Hospital Antitrust Liability in Dealings With Downstream Providers

Michael R. Testerman
Springfield, Missouri

As hospitals continue to offer an increasing number of post-discharge services to their patients, the risk of violating antitrust laws also increases. The author, an attorney, discusses the legal complexities of deciding when, if at all, an antitrust law may be violated.

Health care is changing in America, and in the next 30 years as the "Baby Boom" generation continues to age, more changes are inevitable. Already an area of explosive growth, post-hospitalization - or "downstream" - health care services, such as home intravenous therapy, home medical equipment, private-duty nursing, and hospice, will likely become increasingly important components of our overall health care delivery system. As these ventures emerge, hospitals may face new challenges under the antitrust laws arising out of their dealings with downstream providers.

Growth and change in the system cause adaptive pressure on providers. Governmental regulations inevitably react to new problems and new ventures. In short, the health care industry is dynamic, and the forecast is for ever-increasing change and, with that, economic pressure.

Economic concerns require new approaches. The "old ways" of doing business are no longer appropriate. Hospitals, of course, are no longer just locations where physicians practice medicine. Today's hospital provides a large bundle of services, both "upstream," or pre-admittance, such as air ambulance service and educational classes, and "downstream." Friction can occur when the hospital's interests in downstream services compete with providers who may depend on referrals of hospitalized patients. In certain situations, this friction will undoubtedly lead to legal challenges under the antitrust laws.

The word "antitrust" usually raises the specter of long, complex and expensive litigation. Even most attorneys and judges dread the labyrinthine concepts of the antitrust laws, and few business people fully appreciate their bounds. From ignorance grows confusion, frustration and, sometimes, outright fear.

The antitrust laws are not simple in their application to specific cases. Part of the reason for this complexity is that, perhaps more than any other sort of legal case, antitrust cases turn on their specific facts. To say that virtually any activity is a "clear violation of the antitrust laws" betrays one's unfamiliarity with how these laws are applied. A practice in one city that violates the antitrust laws may pass muster in another location. A practice may be fine at one hospital, but not at another. The value of prior antitrust cases as precedent is limited, because each market and each practice is somewhat different.

One cannot foresee with absolute certainty how the antitrust laws will be applied in a particular case. However, based on certain antitrust principles and economic laws, and in view of the financial stakes, antitrust conflict is predictable. It is possible that some challenges will be successful.

We will examine some aspects of possible challenges to hospital practices affecting providers of downstream services.

The Hospital's Power

Let's assume that a hospital owns a home health care agency subsidiary, and that its share of the area's home health market is 60% or more. The hospital's social services department is assigned to provide planning of post-discharge care, and to apprise patients of their options. In this setting, the hospital may have obligations to other home health care providers in performing those functions.

The market share of the hospital and its home health care agency is a crucial starting point in antitrust analysis. A 60% share of the market may be sufficient to support a finding that the agency has "monopoly power," i.e., the power to raise prices or exclude competition, and such a share is more than sufficient to support an "attempt to monopolize" theory.

Much of the antitrust analysis following the finding of sufficient market strength deals with the specific aspects and effects of the hospital's practices.

Fairness in Referrals

If, for instance, a hospital presents only its own agency to patients without mentioning competitors, and refuses to allow access to patients by those competitors, these actions may constitute an illegal attempt by the hospital to monopolize the home health care services market or even, with sufficient market strength, an illegal actual monopolization of the market.

A relatively recent U.S. Supreme Court decision, *Aspen Skiing Co. v. Aspen Highland Skiing Corp.*, provides some analytical guidance. In this case, one ski resort sued the owner of three nearby runs for excluding it from the "All-Aspen Ticket." There was evidence that the defendant's purpose was to exclude competition by eliminating the other slope from the popular ski package, and that the action significantly reduced the plaintiff's share of the market. The Supreme Court held that where a firm with monopoly power excludes competitors for "predatory" reasons, a violation of the Sherman Act can be found. The analysis implies that a hospital with monopoly power in the home health care market must cooperate with rivals, where lack of cooperation will injure the rivals' ability to compete.

How far such "cooperation" must go has yet to be decided. Presumably, a hospital at least should be "neutral" in referrals, presenting the services and prices of all competitors fairly and truthfully.

Equal Access for Post-Discharge Planning

What if the hospital precludes access to patients by outside agencies for purposes of post-discharge planning? While the hospital may offer justifications for such a policy, the challenger to the practice will contend that if such planning is to occur at all, it must occur at the hospital and is necessary for efficient and effective health care. If access to patients is allowed only for the hospital's agency, the outside provider may complain that the hospital is monopolizing an "essential facility."

The "essential facility" doctrine is an old one, originating with the U.S. Supreme Court's 1912 decision in *United States v. Terminal R.R. Ass'n*. In the *Terminal Railroad* decision, a group of railroads owned the direct access lines into downtown St. Louis, and refused to allow access to competing railroad carriers. Although alternate routes existed, they were far less desirable. The Supreme Court found that the lines were an "essential facility," and that all competitors must be afforded fair access.

Hospitals must be wary of the "essential facility" doctrine in various practices, especially where the size of the hospital and its subsidiary is larger relative to their competitors. After all, hospitalized patients are a "captive audience" of sorts. If the hospital takes advantage of its position by steering patients to its own agency and restricting the activities of competitors, it could run afoul of the doctrine and be adjudged a violator of the antitrust laws.

Justifications for Restricting Competitors

The hospital must be objective and realistic in the justifications it offers for restricting access to patients. Voicing paternalistic concerns for patients cannot disguise underlying economic motives. For instance, suppose a hospital attempts to justify its restrictions on competitors on the grounds that it has a duty to provide post-discharge planning and must ensure the patient's freedom of choice of providers. The question may then be posed: In what respect does the hospital actually demonstrate this concern for the "patient's choice"? If the hospital shows such concern only when it competes in the downstream business, its true economic motives become clearer.

Is the hospital concerned about the patient's freedom of choice of, say, prescription drugs? Obviously, when a prescription is written, a hospital representative does not rush into the patient's room with a list of alternative drugs and their prices. Nor does the hospital routinely advise the patient of different surgical procedures, or anesthesia, or other aspects of in-hospital care. The choice in those areas is, in reality, the doctor's, and if different services or products are to be discussed, that is typically between doctor and patient. If the hospital interjects itself into the decision-making process when it provides a competing service, but not otherwise, those actions would be viewed skeptically.

"Leveraging" the Hospital's Power

Another antitrust theory condemns attempts to "leverage" monopoly power in one market into a second market. In our example, attempts to use monopoly power in the hospital market to gain an advantage in the downstream services market could be a violation.

In *Berkey Photo, Inc. v. Eastman Kodak Co.*, the U.S. Court of Appeals for the Second Circuit (covering New York and other areas in the Northeastern United States) found that a firm cannot exploit monopoly power in one market by refusing to deal with a competitor in order to gain an advantage in a second market, without valid business justifications. There are many cases that apply the same concept.

The "leveraging" theory could be used against a hospital which refuses patient access for competing downstream providers, unless the hospital can justify its actions on the grounds of good or efficient health care. Such justifications should apply across-the-board, and not simply whenever the hospital has a competitive interest.

Recent Antitrust Actions Against Hospitals

Several hospitals have learned the hard way that actions affecting providers of downstream services can lead to antitrust challenges.

On March 11, 1988, a jury in federal court in Tampa, Fla., returned a $2.2 million antitrust verdict against Venice Hospital, Venice, Fla., for certain actions of the hospital's "coordinators" in promoting the hospital's home medical equipment and home health ventures over competitors. The trial court subsequently overturned the jury verdict, and the case is presently on appeal.

A case was filed in 1984 in Washington state *(Beacon Med Care, Inc. v. Sound Home Health Services, Inc.)* against a hospital for allowing one home health care agency access to patients for post-discharge planning, and for recommending that agency's services, without according similar access to the plaintiff home health agency. The defendants asked the court to rule in summary fashion in their favor, stating that such actions would not violate the antitrust laws. The court denied the defendants' motions, and the case settled before trial.

Another case filed in Oregon in 1984, *Home Parenteral Care, Inc. v. Sisters of St. Joseph, etc.*, challenged hospital referral practices. Although the court initially ruled in favor of the hospital, it did so on finding that the hospital's referral practices were neutral and fair. The case also settled, and as part of the settlement terms, the hospital agreed to allow access to patients for post-discharge planning by outside providers, once a company had been selected.

There may be other cases that have been threatened, or even filed and settled, which challenged actions of hospitals in dealings with downstream providers. The lesson is clear: A powerful hospital that restricts access to patients by competing providers, or which "steers" patients to its own agency, runs the risk of exposure to antitrust liability.

Preferential Pricing of Drugs and Supplies

Different antitrust issues arise when a hospital prices drugs, for example, at lower prices to users of its post-discharge services than to other patients or competing providers, or when a hospital obtains lower-than-market wholesale prices because it is a non-profit institution, then passes on these price benefits only to users of its post-discharge services. The Robinson-Patman Act is an antitrust law that generally prohibits price discrimination among purchasers where the effect is harmful to competition.

An exception to Robinson-Patman's general prohibition exists for purchases or sales by non-profit hospitals for their "own use." How far the "own use" exception will allow the hospital to go in according preferential pricing to its own home health agency, for example, has been and will continue to be litigated.

Clearly, preferential pricing on drugs used by patients on the hospital premises (in-patient, out-patient, emergency room) would fall within the "own use" exception and be acceptable. The U.S. Supreme Court held this to be true in its 1976 decision, *Abbott Laboratories v. Portland Retail Druggists Ass'n., Inc.* Tougher issues arise when the drugs or supplies are to be used off the hospital's premises. In its decision, the Supreme Court said that renewals of prescriptions to discharged patients do not fall within the "own use" exception.

The *Portland Retail Druggists* decision also teaches that, absent some occasional emergency, drug purchases by the hospital do not fall into the "own use" exception when the drugs are dispensed to walk-in patients with no present connection with the hospital or its pharmacy.

The Ninth Circuit Court of Appeals, covering California and other locations in the far Western United States, has held that discount drugs purchased by a non-profit HMO for resale to its members falls within the "own use" exception. The U.S. Supreme Court declined to hear an appeal in that case.

In a 1986 decision, the U.S. District Court in Oregon *(Home Parenteral Care, Inc. v. Sisters of St. Joseph, etc.)* found that continuous supply of IV solutions by the hospital's home health agency does, in fact, fall within the "own use" exception. Thus, the hospital's agency obtained a significant price advantage over its competitors. The Oregon decision appears highly suspect in light of the Supreme Court's statement in the *Portland Retail Druggists* case that refills cannot fall within the "own use" exception. In that decision, the Supreme Court observed that the "own use" exception is not "to be applied and expanded automatically to whatever new venture the nonprofit hospital finds attractive in these changing days."

Undoubtedly, where non-profit hospitals attempt to enhance the positions of home health ventures through preferential pricing of drugs and supplies, antitrust challenges may follow.

Risks of Non-Compliance

Antitrust violations can be punished as felonies, and business executives have gone to prison. Defense of a serious case in a civil suit can cost hundreds of thousands of dollars and consume valuable time of administrators, financial officers, social services personnel, and others. If a plaintiff is successful, he can recover threefold the amount of his damages, as well as his costs and attorneys' fees. In short, the expense of violating - or being accused of violating — the antitrust laws can be devastating.

Compliance with the antitrust laws is not simple. Antitrust compliance programs can also be expensive and yet can never lead to absolute confidence. However, astute hospital leaders will undertake efforts to determine whether they are exposed to antitrust liability, and reduce their risks. This does not mean hospitals cannot make money or be aggressive, just that they must have the proper direction. The risks are too great to do otherwise.

Hospitals will face economic pressures in the next few decades, first from the bulge of population now in middle-age, and then in turn, from the relative decrease in patients following passage of the "Baby Boom" generation. Health care delivery will change. Hospitals with sufficient power in their markets must exercise caution when undertaking ventures that compete with independent entities. As post-discharge services continue to increase in financial importance, antitrust challenges surely will follow.

The Author

MICHAEL R. TESTERMAN

Mr. Testerman is an attorney with the Springfield, Missouri, law firm of Greene & Curtis.

Reprints

Michael R. Testerman
Greene & Curtis
1340 East Woodhurst
Springfield, Missouri 65804

Testing For Drugs of Abuse in Urine

John Turk, M.D., Ph.D.
St. Louis, Missouri

Testing for drugs of abuse in the workplace forces the physician and laboratory into an adversarial role with the employee-patient. The author reviews the history of drug testing, current laboratory standards, and the legal controversies surrounding the testing of employees for drugs of abuse.

Urine drug screening is often employed in the emergency evaluation of intoxicated patients with altered states of consciousness. This is an example of traditional medical testing, in which laboratory measurements are used to make diagnostic or therapeutic decisions to benefit the patient. Other examples include the use of urine screening tests to evaluate drug abuse in the differential diagnosis of chronic psychiatric disorders to monitor compliance in a drug rehabilitation program.[1] The latter example involves analyses similar to those performed in a urine drug screen obtained as part of a pre-employment medical evaluation or in a random employee surveillance program. In such cases, however, the test results are intended for the primary benefit of a third party rather than that of the subject from whom the specimen is obtained. The ordering physician and the laboratory enter into an adversarial relationship with the patient, since their examination may result in loss of livelihood or disciplinary action. This adversarial relationship contrasts with the more familiar role of physician and laboratory as patient advocate, and entails a distinct set of liabilities and regulatory concerns.[2] The term "non-medical drug testing" is applied to screening for drugs of abuse on behalf of a third party,[3] and, although controversial,[2-8] it is now widely practiced by public and private employers. This article reviews the current status of such testing.

Military Drug Testing Programs

Military programs have dominated the evolution of non-medical drug testing.[3,5] The Department of Defense established a drug testing program in 1971 to deal with drug abuse by personnel in Viet Nam. Identification of a restricted set of drugs (opiates, barbiturates, and amphetamines) was performed in two stages: a screening assay (enzyme immunoassay or thin layer chromatography), followed by a confirmation test (spectrofluorometry or gas chromatography). The specific drugs and analytic methods have now changed, but this format persists. The Department of Defense program was greatly expanded in 1981, when half of the sailors killed in an explosion aboard the U.S.S. Nimitz were found to have cannabinoid metabolites in their tissues or body fluids. This discovery followed a survey of Navy enlistees which indicated that 48% tested positive for a drug of abuse. Civilian courts and the Assistant Secretary of Defense ruled in 1981 that drug test results could be used against an individual in legal proceedings and in disciplinary actions.

The subsequent expansion of the Navy drug testing program has resulted in a system of five laboratories with 50 mass spectrometers and a total annual capacity of 2.2 million samples, sufficient to test all Navy personnel three times yearly. Each sample is screened by radioimmunoassay (RIA) for cannabinoids, cocaine, phencyclidine (PCP), and opiates.[3,9] In 1982, gas chromatography-mass spectrometry (GC/MS) was adopted as the confirmation method after thousands of false-positive cannabinoid test results were generated in a Navy laboratory because soap residue in extraction tubes produced a peak on gas chromatograms that was confused with that of a cannabinoid metabolite.[3] This episode also spurred development of a certification program for analysts and supervisors and an intricate system of quality control, which have served as models for requirements recently established by the Department of Health and Human Services.[10]

The Navy's program is credited with reducing drug abuse[3-5] because the positive rate in random, unannounced tests had fallen to less than 3% by 1987. This is far less than the 48% positive rate in 1980, but more specific confirmation methods and more stringent quantitative requirements were begun in 1987. Cannabinoids accounted for most of the positive results in the 1980 survey. The cutoff value employed at that time was 5 ng/mL[5] and is now 100 ng/mL.[3,9] The higher cutoff value eliminates arguments about passive inhalation[5] and reduces the likelihood of false positives.

Drug Testing of Federal Civilian Employees

Executive Order 12,564 requires institution of a drug testing program for federal employees.[5] The details of this program have recently been published,[10] and it has encountered legal challenges.[5] A former attorney general of Maryland working with the American Civil Liberties Union and other groups has argued that the program violates Fourth Amendment protections against unreasonable search and seizure.[5] A U.S. District Judge issued a temporary restraining order on Dec. 19, 1988, preventing random drug testing of interstate truck drivers[6] that had been proposed in regulations published by the Department of Transportation in the Nov. 21, 1988, *Federal Register*.[7] Urine testing of these workers "for cause" (e.g. post-accident or pre-employment) was not prevented by the order.[6] Some limitations on urine drug testing of public employees may result from current legal challenges, but the program seems likely to endure in some form.

Drug Testing by Private Employers

Arguments against mandatory drug testing based on the Bill of Rights generally pertain only to government employees.[2] Private employers have wider latitude in imposing drug testing and in basing disciplinary action on test results, although physicians ordering and laboratories performing such tests may be drawn into formal adversarial proceedings to defend their role in this process.[2]

An increasing number of private employers are using drug screening to attempt to reduce productivity losses, safety hazards, and health care costs associated with drug abuse.[4,5] A 1987 report by the American Management Association indicated that 340 of 1,000 companies surveyed do use pre-employment or random drug screening.[5]

Accuracy of Urine Drug Screening

The accuracy of urine drug testing has frequently been questioned, and this issue has been examined in some detail in published studies. The Centers for Disease Control tested 13 drug screening laboratories in 1981 and reported that the false negative rate exceeded 50% for some drugs of abuse.[11] The false positive rate was generally between 0% and 3%, but was 12% for methadone.[11] The CDC recommended that drug treatment centers monitor the performance of their testing laboratories with blind proficiency samples.[11]

A study by the National Institute of Drug Abuse in 1986-1987 tested 50 laboratories with a battery of 11 drugs and observed a false positive rate of 1.5% and a false negative rate of 17% to 31%.[4] Cannabinoids were rarely missed (5% false negatives), but morphine and PCP were identified in only half of all cases. False negative rates below 8% were achieved by 64% of laboratories using GC/MS for test confirmation, but by only 14% of other laboratories. The American Association of Clinical Chemistry in 1987 tested 47 drug screening laboratories that subscribed to an AACC in-service training and monthly proficiency testing program. Drugs examined were amphetamines, cannabinoids, cocaine, opiates, and PCP. The overall accuracy rate was 99.2% The false negative rate was 0.8%, and the false positive rate was 0.05%.[8] These studies suggest that superior laboratory performance in drug screening is associated with participation in ongoing proficiency programs and with GC/MS confirmation. False positive reports are relatively infrequent, but false negative reports occur substantially more often.

Analytic Constraints in Drug-of-Abuse Screening

Evaluation of false negative rates is complex because screening procedures such as thin-layer chromatography are appropriate (and inexpensive) tools in patients whose urine drug concentrations are high, as in the emergency evaluation of acutely intoxicated patients. Much greater sensitivity is required to detect the lower concentrations produced by abuse of a drug days or weeks before the specimen is collected. Immunoassays are essentially the only screening procedures with such sensitivity. It is therefore important that the laboratory understand the purpose of the screen, that the physician understand the nature of the screening procedure, or that a formalized ordering system segregate screens obtained for different purposes. It is not clear that these conditions were met in the blind phase of the recently reported NIDA study, and this may have contributed to the apparently high false negative rate.[4] The requirements for confirmatory tests are also more stringent in testing for occult drug abuse than in evaluating emergency intoxication.

In addition to low drug concentrations, a further difficulty is that drug-of-abuse screening is applied to populations with rather low rates of positivity. Only 0.05% to 5% of office workers test positive for drugs of abuse in random screens.[5] The prevalence of a condition exerts a major impact on the predictive value of a test used to detect it.[12] A test with a sensitivity and specificity of 99% applied to a population with a 10% prevalence of a condition has a 92% positive predictive value. If the prevalence of the condition is only 1%, the predictive value of the same test falls to 50%, and half of all positives are therefore false positives. Confirmation with an independent test of equal sensitivity and specificity raises the predictive value of the testing sequence to 99%.[12] This illustrates the statistical basis of the need to confirm presumptive positive drug screens. Confirmatory tests must be highly specific if the screening procedure is applied to populations with a low prevalence of drug abuse.

Mandatory Guidelines for Drug Screening of Federal Employees

Stringent HHS guidelines published in April 1988 regulate all aspects of drug testing of federal employees, from observed collection of the specimen, measurement of its temperature, and completion of a 5-page chain-of-custody form, to the review of analytic data and certification of laboratories and their personnel.[10] Only amphetamines, cannabinoids, cocaine, opiates and PCP may be tested for. Screening must be performed by immunoassay and confirmed by quantitative GC/MS. Laboratory certification requires a qualifying evaluation with three rounds of monthly performance tests and on-site inspection, followed by semi-monthly proficiency tests and on-site inspection every three to six months. Certification may be revoked for any false positive reports, if less than 90% of drug challenges are correctly identified, if fewer than 80% of drug challenges are quantitated to within 20% of the group mean, or if quantitation of any specimen differs by more than 50% of the group mean. Quantitative confirmation is controversial and has not been standard practice in most civilian toxicology laboratories. Of the 50 laboratories surveyed in the recent NIDA proficiency study,[4] none would have satisfied the criteria for quantitative accuracy as specified by HHS. Civilian laboratories not participating in drug testing of federal employees are not currently required to meet HHS criteria or to obtain NIDA certification. The existence of the HHS criteria will almost certainly change the legal standards for the defensibility of urine drug testing data. This will likely force changes in the practices of civilian laboratories over time.[3]

Illustrative Non-Medical Drug Testing Procedures

Published procedures for urine drug-of-abuse testing modeled after Navy protocols[9] with modifications[13-17] are now available for the five classes of drugs of abuse for which NIDA has established guidelines.[7,10] All screens may be performed by immunoassays, such as enzyme immunoassay (EMIT) or fluorescence polarization immunoassay (ADx). Quantitative GC/MS confirmation can be performed with "benchtop" mass spectrometers, which are relatively inexpensive by historical standards. A summary of some examples of confirmation procedures for each of the five classes of drugs follows.

Cannabinoids

The metabolite 11-nor-delta 9-tetrahydrocannabinol-9-carboxylic acid may be measured by GC/MS after alkaline hydrolysis of the glucuronide conjugate, co-extraction from acidified urine with a deuterium-labeled internal standard, and conversion to a dipropyl derivative.[13] Three ions are monitored for internal standard and for cannabinoid metabolite, including the molecular ion and ions generated by loss of a propyl group or of a carboxypropyl moiety. Confirmation by Navy criteria requires a GC retention time within 2% of a retention time standard, ratios of monitored ions within 20% of a calibration standard, and a measured amount of metabolite exceeding a pre-defined cutoff value.[9] Cutoffs recommended by HHS are 100 ng/mL for screening and 15 ng/mL for confirmation. Passive inhalation may result in urine levels of cannabinoid metabolites above 20 ng/mL on screening immunoassays, but is unlikely to produce levels above 100 ng/mL.[2] Immunoassays with a cutoff of 20 ng/mL become negative by five days after last cannabis use in infrequent users, but may remain positive after more than 40 days of abstinence in heavy users.[2] Immunoassays with a cutoff of 100 ng/mL generally become negative three days after last use in infrequent users.[2] False negative assays for urine THC metabolites can be caused by a variety of adulterants, including table salt and vinegar.[16] Adulterated urine can sometimes be recognized by abnormal pH, specific gravity, or appearance. The presence of all the other analytes discussed below can also be masked by adulterants.[16] Cannabinoids may account for the vast majority of positives in non-medical drug-of-abuse screens for pre-employment evaluations and employee surveillance programs.

Cocaine

The principal urinary metabolite of cocaine is benzoylecgonine, which may be measured by GC/MS after co-extraction from alkalinized urine with a deuterium-labeled internal standard and conversion to the pentafluoropropyl derivative.[17] Identification and quantitation by GC/MS can be performed with an algorithm similar to that described for the cannabinoid metabolite above. Cutoff values for screening and confirmation are 300 ng/mL and 150 ng/mL, respectively. Benzoylecgonine may be detected in urine for 48 to 72 hours after a single dose of cocaine.[2] Recent reviews suggest that 15% of the U.S. population had used cocaine by 1986, and that 40% of those in the age range 25-30 years had used the drug.[18] Benzoylecgonine is generally the second most frequently encountered illicit drug metabolite in non-medical drug-of-abuse screens.

Phencyclidine

PCP may be co-extracted from alkalinized urine with a deuterium-labeled internal standard and analyzed by GC/MS without derivatization.[13] Cutoff values for screening and confirmation are 25 ng/mL. Urinary excretion of PCP continues after a mean of two weeks of abstinence in chronic users, but most samples are negative by 30 days after last use.[19]

Opiates

Codeine, morphine, and hydromorphone may be confirmed by quantitative GC/MS. Deuterium-labeled codeine, deuterium-labeled morphine, or both may be used as internal standards. Acid hydrolysis is performed to release morphine from its glucuronide conjugate. The opiates may then be extracted from alkalinized urine and converted to the trimethylsilyl derivatives.[14] Cutoff values are 300 ng/mL for screening and confirmation. Detectable urinary excretion of morphine may continue up to 96 hours after a single intravenous dose of heroin.[20]

Amphetamines

Methamphetamine and amphetamine may be co-extracted from alkalinized urine with internal standard, deuterium-labeled methamphetamine and analyzed by GC/MS as the trifluoroacetyl derivatives.[13] Cutoff values for screening and confirmation are 1000 ng/mL and 500 ng/mL, respectively. About 60% of an oral dose of amphetamine is excreted within 48 hours as parent drug in acid urine, but only 3% to 7% of the dose is excreted during that period in alkaline urine.[21]

References

1. Gold MS, Dackis CA: Role of the laboratory in the evaluation of suspected drug abuse. *J Clin Psych* 1986;47:1(Suppl):17-23.
2. Critical issues in urinalysis of abused substances: Report of the substance-abuse testing committee. *Clinical Chemistry* 1988;34:605-632.
3. Irving JH: Drug testing in the military: Technical and legal problems. *Clinical Chemistry* 1988;34:637-640.
4. Davis KH, Hawks RL, Blanke RV: Assessment of laboratory quality in urine drug testing: A proficiency testing pilot study. *JAMA* 1988;260:1749-1754.
5. Marshall E: Testing urine for drugs. *Science* 1988;241:150-152.
6. Testing for drugs blocked. *St. Louis Post-Dispatch*, Dec. 21, 1988, p 1.
7. Procedures for transportation workplace drug testing programs. *Federal Register* 1988;53:47002-47016.
8. Frings CS, White RM, Battaglia DJ: Status of drugs-of-abuse testing in urine: An AACC study. *Clinical Chemistry* 1987;33:1683-1686.
9. US Navy: *Navy Drug Screening Standard Operating Procedures Manual*. Oct 15, 1987.
10. Mandatory guidelines for federal workplace drug testing programs. *Federal Register* 1988;53:11970.
11. Hansen HJ, Caudill SP, Boone J: Crisis in drug testing: Results of a CDC blind study. *JAMA* 1988;26:2382-2387.
12. Spiehler VR, O'Donnell CM, Gokhale DV: Confirmation and certainty in toxicology screening. *Clinical Chemistry* 1988;34:1535-1539.
13. Mule SJ, Casella GA: Confirmation of marijuana, cocaine, morphine, codeine, amphetamine, methamphetamine, phencyclidine by GC/MS in urine following immunoassay screening. *J Analytical Toxicol* 1988;12:102-107.
14. Mule SJ, Casella GA: Rendering the "poppy-seed defense" defenseless: Identification of 6-monoacetylmorphine in urine by gas chromatography/mass spectroscopy. *Clinical Chemistry* 1988;34:1427-1430.
15. Poyhonen JW, Bonelli EJ: Screening and confirmation of drugs of abuse with TOXI-LAB TLC and Hewlett-Packard GC/MS systems. Marion Laboratories Inc and Hewlett-Packard Company, 1988.
16. Mikelsen SL, Ash KO: Adulterants causing false negatives in illicit drug testing. *Clinical Chemistry* 1988;34:2333-2326.
17. Mule SJ, Casella GA: Confirmation and quantitation of cocaine, benzoylecgonine, ecgonine methyl ester in human urine by GC/MS. *J Analytical Toxicol* 1988;12:153-155.
18. Gavin FH, Ellinwood EH: Cocaine and other stimulants: Actions, abuse, and treatment. *New Engl J Med* 1988;318:1173-1182.
19. Simpson GM, Khajawall AM, Alatorre E, et al: Urinary phencyclidine excretion in chronic abusers. *J Toxicol Clin Toxicol* 1983;19:835-842.
20. Yeh SY, Gorodetzly CW, McQuinn RL: Urinary excretion of heroin and its metabolites in man. *J Pharmacol Exp Ther* 1976;196:249-256.
21. Ellenhorn MJ, Barceloux DG: Amphetamines, in *Medical Toxicology: Diagnosis and Treatment of Human Poisoning*, 1988, pp764-777.

The Author

JOHN TURK, M.D., PH.D.

Dr. Turk is an associate professor of internal medicine at the Washington University School of Medicine, St. Louis, and director of toxicology and therapeutic drug level monitoring at the Clinical Chemistry Laboratory at Barnes Hospital, St. Louis.

Reprints

John Turk, M.D., Ph.D.
Director of Toxicology and Therapeutic Drug Level Monitoring
Clinical Chemistry Laboratory
Barnes Hospital
Barnes Hospital Plaza
St. Louis, Missouri 63110

Commentary

by Jack Croughan M.D., and Karen Sanders, BSN, RN

Urine Testing in Impaired Physicians

Our hope is that as a physician progresses in recovery, urine screens become less of an incentive and the desire to stay healthy increases. At some point, physicians need to take responsiblility for their own recovery and do what is necessary to stay well without rigid monitoring.

The Missouri Physician's Health (MPH) Program uses urine screening as a routine method of monitoring physicians with a history of alcohol or drug abuse. The most effective way to assess whether a physician is remaining chemically-free is through the use of such testing. When used in conjunction with appropriate treatment and follow-up urine screening becomes a valuable tool in assessing the progress of chemically-impaired physicians.

Urine testing as used by the MPH program not only allows for assessing abstinence, but also provides the participating physician with a reliable method of proving sobriety if needed. In the case of a physician being sued for malpractice where it becomes known that he or she has a history of chemical dependency, it can be shown that the physician was not using a substance at the time of the alleged malpractice if all urine screens have been negative. Similarly if a physician has a history of chemical dependency and a work performance problem arises, it can be determined if the physician has been using or not by obtaining urine drug screens.

Although no method of drug testing is foolproof the system used by the MPH program has proven very reliable. All screens are collected on a random basis as determined by the length of recovery of each physician. One central laboratory is used for all screens done throughout the state of Missouri in order to provide continuity to the recovery program. Legal chain of custody is maintained for each specimen which includes:

1. Witness of the specimen by urine monitor;
2. Sealing of the specimen bottle in the presence of each participant;
3. Documenting by each person who handles the specimen on a standard chain of custody form.

When confronting a potential false positive, our program allows input from individual participants in the drug screening process. Specifically, all samples obtained are separated when received by our laboratory. Part of the sample is frozen for retesting if necessary. Should a positive be obtained through standard testing methods (thin layer chromatography or radioimmunoassay) that specimen is automatically confirmed by gas chromatography — mass spectrometry. (GC-MS) When a specimen is positive by GC-MS the physician participant has the option of having the specimen retested at a laboratory of his choice.

Drugs of abuse tested for by the MPH program include: amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, ethanol, meperidine, opiates and pentazocine. Monitoring of physicians whose primary drug of choice is fentanyl is accomplished through alternate methods. Metabolites of fentanyl, sublimaze, and su-fentanyl are rapidly secreted and difficult to detect in standard urine screening. Participants abusing fentanyl are required to take an opiate antagonist (naltrexone) on a daily

continued on page 342

Commentary

continued from page 341

basis. Urine screening is then conducted to assess compliance with this medication. If naltrexone does not appear when tested there is an excellent chance that the physician used the fentanyl. Naltrexone will eliminate any "high" or euphoria experienced by the user, so it must be avoided if the user wishes to obtain the euphorigenic effects of the fentanyl.

The physicians participating in the MPH program are also required to actively participate in a recovery program as well as having urine screens done. Attendance at 12-step programs such as Alcoholics Anonymous and/or Narcotics Anonymous, physician support groups, caduceus clubs and individual psychotherapy help to make sobriety comfortable and happy for physicians, rather than just staying sober to have clean urine. As such, the urine screens are part of a comprehensive recovery program.

Our hope is that as a physician progresses in recovery, urine screens become less of an incentive and the desire to stay healthy increases. At some point in time physicians need to take responsibility for their own recovery and do what is necessary to stay well without the rigid monitoring provided by the MPH program.

Anyone interested in other aspects of the MPH including referrals to the program can reach us through our hotline (314) 768-4990.

Dr. Croughan is medical director of the Missouri Physicians' Health Program, sponsored by the Missouri State Medical Association. Ms. Sanders serves as Program Coordinator.

Progress Notes

continued from page 312

able. **c)** Angiography performed in conjunction with a PTCA will be included in the allowable for the PTCA. **d)** Temporary pacemaker insertions during or immediately following a PTCA will not be reimbursed. **e)** Medical management prior to a PTCA when considered emergent in nature will be reimbursed. Medical management following a PTCA is based on a global fee concept. **f)** Only one PTCA per hospitalization will be reimbursed. **g)** A second PTCA performed within 90 days will be reimbursed when documentation of restenosis of the artery is received.

As always, claims must be submitted with the following information: **a)** Documentation of prior medical management; **b)** Cardiac catheterization report; and **c)** ECG and/or stress interpretation.

These changes will be consistent with our regular business policy. However, these are only guidelines and whenever an unusual situation occurs it can be reviewed on an individual basis.

Please send your comments to: Richard Michelson, M.D., Medical Director, Blue Cross & Blue Shield of Kansas City, One Pershing Square, P.O. Box 419169, Kansas City, MO 64141-6169.

AMA, MSMA file court brief in Cruzan case

In May, the AMA, MSMA and the American Academy of Neurology filed briefs with the U.S. Supreme Court asking for a decision on Nancy Cruzan's right to die. Ms. Cruzan of Carterville, MO, has been in a persistent vegetative state since a 1983 car accident. The MSMA passed an amended resolution at the recent annual meeting affirming a patient's right to forego life support, including artificial feeding.

MSMA amendments pass as Session ends

As the clock moved past 6 p.m. on Friday, May 12, the Missouri Legislature finished the First Session of the 85th General Assembly. And, in retrospect, it wasn't a bad Session for Medicine! Of the several bills introduced that were considered detrimental to physicians and their patients, **none passed in an unacceptable form.**

HCS 320/Physical Therapists was a thorn for MSMA all Session as P.T.s and powerful bill sponsors sought to prohibit physicians from having the right to hire P.T.s or have a financial interest in a P.T. clinic. After MSMA worked to successfully amend the bill to substitute language that required physicians to post notice of any financial interest in an ancillary service, the bill went to a joint conference committee. The committee recommended: 1)The creation of a Physical Therapy Advisory Committee for the Board of Healing Arts, and 2) allow the Advisory Committee to establish a form that physicians must have patients sign when the physician refers a patient to a P.T. employee or a clinic in which the doctor has an interest. **This version of the bill was passed and sent to the Governor.**

SB 217/Physician Assistants provides for registration of physician assistants, occupational therapists and respiratory therapists. Amendments provide safeguards against P.A.s having the ability to practice in satellite clinics. Rep. Tommy Macdonnell, M.D. devoted countless hours on this issue.

SB 283/Temporary Licensure permits the Board of Healing Arts to issue temporary licenses to recent medical school graduates and extends the period a "visiting professor" can have a temporary temporary license.

SB 19/AIDS removed the "Sunset Clause" from the AIDS statutes passed in 1988. No other changes were made in the AIDS law.

More than 94 physicians participated in the P.I.P. throughout the Session and many contacted their legislators on important issues as was evident in the final stages of the P.T. bill. THANK YOU to everyone who participated in the future of medicine. The MSMA encourages all members to be involved in the legislative process that afffects us all.

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ ____________________

Date of Birth ____________________

Smoker/Non-Smoker (circle one)

Name ____________________

Address ____________________

City/State ____________________

Zip ______________ Phone ______________

Most patients need only one.

K-DUR™ 20 Microburst Release System™
(potassium chloride) 20mEq Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System®
(potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1 For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g , spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g , incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3 Correction of acidosis, if present, with intravenous sodium bicarbonate.
4 Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

I002004

13944326
Rev 4/87

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

Professional help for health professionals.

Substance abuse is a growing problem among health professionals. At Timberlawn Psychiatric Hospital, a special program exists to help health professionals overcome substance abuse problems.

A range of treatment options, individual and group therapy programs, and other recovery-oriented services are all geared toward the unique needs of the health professional. An individualized evaluation leads to selection of the most appropriate treatment program, which is further enhanced by specialized aftercare and monitoring services. Treatment team members include Board Certified psychiatrists, clinical psychologists, psychiatric social workers and substance abuse counselor specialists with certification in their field.

At Timberlawn, we understand the unique challenges faced by health professionals today, and we're here to help. For more details on our facility or referral arrangements, contact: Dr. Edgar P. Nace, Chief of Substance Abuse Services.

TIMBERLAWN
PSYCHIATRIC HOSPITAL
PROFESSIONALS HELPING PROFESSIONALS

4600 Samuell Blvd. • P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958 • 1-800-426-4944

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

June

1-5 **Neurosurgery: Part I — Microsurgery of the Brain** — Location: St. Louis University Medical Center. Contact: Anita Herbst, CME Office, St. Louis University, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

6-8 **Neurosurgery: Part II - Spine-Microsurgery/Stabilization** — Location: St. Louis University Medical Center. Contact: Anita Herbst, CME Office, St. Louis University, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Hypertension Therapy in the 90's: The Quality of Life** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

9-10 **Frontiers in Endoscopy: Flexible Endoscopy of the Urinary Tract** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

9-10 **Thorny Medical-Legal Issues** — Location: Westin Hotel, Portland, OR. Contact: The American College of Legal Medicine, P.O. Box 3190, Maple Glen, PA 19002. 1-800/433-9137.

23-25 **Missouri Chapter of the American College of Surgeons Annual Meeting** — Location: Lodge of the Four Seasons, Lake Ozark, MO. Contact: Linda Wheelen, 1926 S. Broadway, Springfield, MO 65807. 417/869-5222.

23 **Nd:YAG Laser/Resectoscope Hysteroscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

July

7 - 8 **CO_2-Nd: YAG Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

12 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

14 -15 **The American College of Surgeons Cancer Management Course** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 600 S. Euclid, St. Louis, MO 63110. 314/362-6893.

20 **Symposium on Asthma** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 600 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 - 27 **Masters 3 Course in Advanced Death Investigation** — Location: St. Louis University Learning Resources Center. Contact: Mary Fran Ernst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/854-6500.

28 - 29 **Advanced Trauma Life Support Provider Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S.Grand Blvd., St. Louis, MO 63104. 314/577-8372.

August

1 - 4 **3rd Combined Clinical Conference on Emergency Care** — Location: Marriott's Tan-Tar-A Resort, Osage Beach, Lake of the Ozarks. Contact: Dean Nierling, M.D., F.A.C.E.P., University of Missouri Hospital and Clinics, Columbia, MO 65212. 314/882-8091.

6 - 20 **Traditional and Modern Health Care in Kenya** — Location: Travel Program to East Africa. Contact: Irene Kalnins, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8919.

11 **Nd: YAG Laser Resectoscope Hysteroscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

16 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

25 -26 **CO_2 - Nd:YAG Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

September

13 - 14 **Eighth Annual Symposium on Geriatrics and Gerontology** — Location: Clarion Hotel, St. Louis, MO. Contact: Diane Coibion, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/894-6510.

13 - 14 **Care of the Aged: Applications of Health Services Research** — Location: Clarion Hotel, St. Louis, MO. Contact: Conference Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

25 **Eighteenth Annual Wendell G. Scott Lecture: Pulmonary Embolism and Technology Assessment — Lessons from a Multicenter Trial.** Speaker: Dr. James H. Thrall, Harvard Medical School. Contact: Ronald G. Evans, M.D., Director, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7100.

27 **Lowering Lipids** — Location: Omni International Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402, S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

29 - 30 **Advanced Trauma Life Support Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8372.

October

5 - 7 **Biomedical Image Processing with Microcomputers** — Location: Marriott's Pavilion Hotel, St. Louis, MO. Contact: Loretta Giacoletto, CME Office, Washington University School of Medicine, Box 8063, S. Euclid, St. Louis, MO 63110. 314/362-6891.

6 - 8 **Ozark Chest Conference: Lung & Heart/Lung Transplantation** — Location: Tan-Tar-A, Lake Ozark, MO. Contact: American Lung Association of Eastern Missouri, 1118 Hampton Avenue, St. Louis, MO 63139-3196. 314/645-5505.

18 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

November

2 - 4 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis MO. Contact: Virgina Eason, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

November

10 - 11 **Nd:YAG Operative Hysteroscopy/Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

15 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

December

1 - 2 **17th Annual Diabetes Symposium: Current Topics in Diabetes for the Practicing Physician** — Location: Hyatt Regency, St. Louis Union Station. Contact: Jeanne Rogers, Kilo Diabetes & Vascular Disease Research Foundation, 1227 Fern Ridge Parkway, #100, St. Louis, MO 63141. 314/434-6500.

8 - 9 **Head Injuries** — Location: Omni International Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

Why does JACKSON & COKER *recruit more physicians each year than any other company?*

☐ Largest pool of available physicians in the nation

☐ Network of 7 regional offices nationwide

☐ Expertise that produces unparalleled results in recruiting quality physicians

☐ Proven system that produced over 1,000 placements in the last 3 years.

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

JACKSON
AND COKER

Physician's Recognition Awards

Twenty-nine MSMA members qualified for the MSMA-AMA Physician's Recognition Award during March 1989. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Boone

John B. Arthaud, *Columbia*

Butler-Wayne-Ripley-Carter

Alton D. Brookreson, *Poplar Bluff*

Cole

Rebecca R. Lueckenhoff, *Jefferson City*

Cooper

Byron M. Stuart, *Boonville*

Greene

Francis M. Maple, *Springfield*
William K. Taylor, *Springfield*

Jasper

John E. Goff, *Joplin*

Metro. Med-Greater Kansas City

Mari Anne Butterfield, *Lee's Summit*
Gustave Eisemann, *Kansas City*
Jerry C. Freeman, *Kansas City*
Paul W. Nelson, *Kansas City*
Milton B. Ozar, *Kansas City*
Robert L. Rogers, *Kansas City*
Reid C. Smith, *Kansas City*
J. Simon Szeto, *Kansas City*

Perry-Ste. Genevieve

James R. Fairchild, *Perryville*

St. Louis Metropolitan

Linda A. Fisher, *St. Louis*
Lee B. Heutel, *Maplewood*
John E. Krettek, *Chesterfield*
Samuel E. Logan, *St. Louis*
Fletcher T. Ott, *St. Louis*
Paul J. Petruska, *St. Louis*
Marvin Rennard, *St. Louis*
Anthony S. Shen, *St. Louis*
Bruce J. Walz, *St. Louis*
Mardonio J. R. Yap, *Florissant*
Vernon L. Young, *St. Louis*

South Central

Robert D. Shaw, *Willow Springs*

West Central

William A. Turner, *Nevada*

New Members

■ **Allan D. Ahlschier, M.D.,** Radiology Dept., St. Frances Hospital, 2016 S. Main St., Maryville 64468, has become a member of the Northwest Missouri County Medical Society. Dr. Ahlschier received his preliminary education at Baylor University and obtained his medical degree at the Tulane University School of Medicine in 1966. He completed his residency at Tripler Army Medical Center, Honolulu, HI. Dr. Ahlschier specializes in diagnostic radiology.

■ **John H. Brabson, M.D.,** 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Brabson received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1982. He completed his residency at the Ochsner Medical Foundation, New Orleans, LA. Dr. Brabson specializes in pulmonary medicine.

■ **Marden L. Brown, M.D.,** Suite 302, 1515 W. Truman Rd., Independence 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Brown received his preliminary education at California State University and obtained his medical degree at the University of Nebraska College of Medicine in 1980. He completed his residency at United Hospital Center, Clarksburgh, WV. Dr. Brown specializes in family practice.

■ **Robert P. Bruce, M.D.,** Suite 207, 6420 Prospect, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bruce received his preliminary education at Kansas State University and obtained his medical degree at the University of Kansas School of Medicine in 1982. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Bruce specializes in orthopaedics.

■ **Lester R. Bryant, M.D.,** MA204 Medical Science Building, UMC School of Medicine, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Bryant received his preliminary education at the University of Kentucky and obtained his medical degree at the University of Cincinnati College of Medicine in 1955. He completed his residency at the University of Cincinnati, Cincinnati, OH. Dr. Bryant specializes in surgery.

■ **Gregory S. Campbell, M.D.,** One Hospital Drive, Dept. of Otolaryngology, UMC School of Medicine, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Campbell received his preliminary education at the Citadel and obtained his medical degree at the University of South Florida in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Campbell specializes in otolaryngology.

■ **Karen R. Cornwell, M.D.,** Suite 328, 1010 Carondelet Dr., Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Cornwell received her preliminary education at the University of Kansas and obtained her medical degree at the University of Kansas Medical School in 1977. She completed her residency at St. Luke's Hospital, Kansas City, MO. Dr. Cornwell specializes in obstetrics/gynecology.

■ **Perry J. Culver, Jr., M.D.,** Suite 332, 4320 Wornall Rd., Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Culver received his preliminary education at Harvard University and obtained his medical degree at Harvard Medical School in 1981. He completed his residency at Beth Israel Hospital, Boston MA. Dr. Culver specializes in gastroenterology.

■ **Karel A. DeLeeuw, D.D.S., M.D.,** 1965 S. Fremont, Suite 1000, Springfield 65804, has become a member of the Greene County Medical Society. Dr. DeLeeuw received his preliminary education at Northwestern University and obtained his medical degree at Texas Tech University School of Medicine in 1987. He completed his residency at the University of South Florida, Tampa, FL. Dr. DeLeeuw specializes in surgery.

■ **Patricia M. Dix, M.D.,** 1000 E. Primrose, #170, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Dix received her preliminary education at Alverno College and obtained her medical degree at the University of Illinois in 1972. She completed her residency at West Virginia University, Morgantown, WV. Dr. Dix specializes in obstetrics/gynecology.

■ **Thomas G. Habiger, M.D.,** 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Habiger received his preliminary education at the University of Minnesota and obtained his medical degree at the University of Minnesota in 1979. He completed his residency at the University of Minnesota, St. Paul, MN. Dr. Habiger specializes in neurology.

■ **Earl R. Hackett, M.D.,** 1965 S. Fremont, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Hackett received his preliminary education at Drury College and obtained his medical degree at Western Reserve University in 1957. He completed his residency at Charity Hospital of New Orleans, New Orleans, LA. Dr. Hackett specializes in neurology.

■ **Thomas J. Hancock, D.O.,** 1111 Madison St., Jefferson City 65102, has become a member of the Cole County Medical Society. Dr. Hancock received his preliminary education at St. Ambrose University and obtained his osteopathic degree at the Kirksville College of Osteopathic Medicine in 1968. He completed his residency at Charles E. Still Hospital, Jefferson City, MO. Dr. Hancock specializes in family medicine.

■ **Mark L. Jary, M.D.**, 1106 West Jackson, Ozark 65721, has become a member of the Greene County Medical Society. Dr. Jary received his preliminary education at Iowa State University and obtained his medical degree at the University of Iowa in 1983. He completed his residency at West Suburban Hospital Medical Center, Oak Park, IL. Dr. Jary specializes in family practice.

■ **William A. Kessinger, M.D.**, 3231 S. National Ave., Springfield 65807, has become a member of the Greene County Medical Society. Dr. Kessinger received his preliminary education at the University of Texas and obtained his medical degree at Texas A & M University, College of Medicine in 1985. He completed his residency at the University of Oklahoma Health Science Center, Oklahoma City, OK. Dr. Kessinger specializes in pediatrics.

■ **Subhash S. Kherdekar, M.D.**, 616 N. Main, Mount Vernon 65712, has become a member of the Ozarks County Medical Society. Dr. Kherdekar obtained his medical degree at the Medical College of Nagpur University, India in 1968. He completed his residency at St. Francis Hospital, Evanston, IL. Dr. Kherdekar specializes in pulmonary diseases.

■ **Neal G. LaPointe, D.O.**, Family Medical Center, 420 East High St., Jefferson City 65101, has become a member of the Cole County Medical Society. Dr. LaPointe received his preliminary education at Washington and Jefferson College and obtained his osteopathic degree at the University of Health Sciences College of Osteopathic Medicine in 1987. He completed his residency at Charles E. Still Hospital, Jefferson City, MO. Dr. LaPointe specializes in general practice.

■ **Robert A. MacNaughton, II, M.D.**, P.O. Box 5, Smithville 64089, has become a member of the Clay-Platte County Medical Society. Dr. MacNaughton received his preliminary education at the University of Kansas and obtained his medical degree at the Kansas University Medical Center in 1984. He completed his residency at the Kansas University Medical Center, Kansas City, KS. Dr. MacNaughton specializes in radiology.

■ **William S. Magill, D.O.**, 1900 S. National, #2500, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Magill received his preliminary education at the University of Denver and obtained his osteopathic degree at the Kansas City College of Osteopathic Medicine in 1980. He completed his residency at Tripler Army Medical Center, Honolulu, HI. Dr. Magill specializes in obstetrics/gynecology.

■ **James B. Mattax, Jr., M.D.**, 1000 E. Primrose, Suite 420, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Mattax received his preliminary education at Oklahoma State University and obtained his medical degree at the University of Texas Southwestern Medical School in 1983. He completed his residency at the University of Texas Medical School Affiliated Hospitals, Dallas, TX. Dr. Mattax specializes in ophthalmology.

■ **Dan A. McLaughlin, D.O.**, 2400 Frederick, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. McLaughlin received his preliminary education at Rockhurst College and obtained his osteopathic degree at the University of Health Sciences College of Osteopathic Medicine in 1979. He completed his residency at the University Hospital, Kansas City, MO. Dr. McLaughlin specializes in anesthesiology.

■ **Gerald P. McManama, M.D.**, UMC Dept. of Surgery, M575 UMCHC, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. McManama received his preliminary education at the University of Washington and obtained his medical degree at Johns Hopkins School of Medicine in 1980. He is completing his residency at the University of Missouri Hospital and Clincs, Columbia, MO. Dr. McManama specializes in vascular surgery.

■ **Brian M. Osgood, M.D.**, Suite 500, 4240 Blue Ridge Blvd., Kansas City 64133, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Osgood received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas in 1983. He completed his residency at the University of Missouri-Kansas City Consortium for Health Education, Kansas City, MO. Dr. Osgood specializes in medical oncology.

■ **Charles H. Pancoast, M.D.**, St. Francis Medical Center, 211 St. Francis Drive, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Pancoast received his preliminary education at the University of South Dakota and obtained his medical degree at the University of South Dakota School of Medicine in 1980. He completed his residency at McKennan Hospital, Sioux Falls, SD. Dr. Pancoast specializes in emergency medicine.

■ **Jeffrey C. Reese, M.D.**, 2015 N. 36th St., St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Reese received his preliminary education at Washington University and obtained his medical degree at St. Louis University Medical School in 1983. He completed his residency at St. Louis University, St. Louis, MO. Dr. Reese specializes in general surgery.

■ **Wendell J. Scott, M.D.**, 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Scott received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1983. He completed his residency at the University of Missouri, Columbia, MO. Dr. Scott specializes in ophthalmology.

■ **Allan J. Shapiro, M.D.**, 1000 E. Primrose, #350, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Shapiro received his preliminary education at Stanford University and obtained his medical degree at Washington University School of Medicine in 1973. He completed his residency at St. Louis Children's Hospital, St. Louis, MO. Dr. Shapiro specializes in pediatrics and pediatric cardiology.

■ **Thomas M. Shultz, M.D.**, 1000 E. Primrose, #270, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Shultz received his preliminary education at

Vanderbilt University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1983. He completed his residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Shultz specializes in obstetrics/gynecology.

■ **Jeffrey A. Swetnam, M.D.**, 113 W. Hickory, Sale Hospital, Neosho, MO 64850, has become a member of the Ozark Medical Society. Dr. Swetnam obtained his medical degreee at the University of Missouri-Kansas City in 1982. He completed his residency at Tulane University School of Medicine, New Orleans, LA. Dr. Swetnam specializes in general surgery.

■ **Clinton F. Welsh, M.D.**, University of Missouri Health Sciences Ctr., M349, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Welsh received his preliminary education at New Mexico State University and obtained his medical degree at the University of New Mexico School of Medicine in 1980. He completed his residency at the University of Missouri Health Sciences Center, Columbia, MO. Dr. Welsh specializes in plastic surgery.

■ **Clay C. Whitehead, M.D.**, 1014 W. St. Maartens Dr., St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Whitehead received his preliminary education at the University of California-Berkeley and obtained his medical degree at the University of California-Los Angeles in 1968. He completed his residency at Neuropsychiatric Institute, UCLA, Los Angeles, CA. Dr. Whitehead specializes in psychiatry.

■ STUDENT MEMBERS

University of Missouri-Kansas City

Richard L. Baumann, Jr.

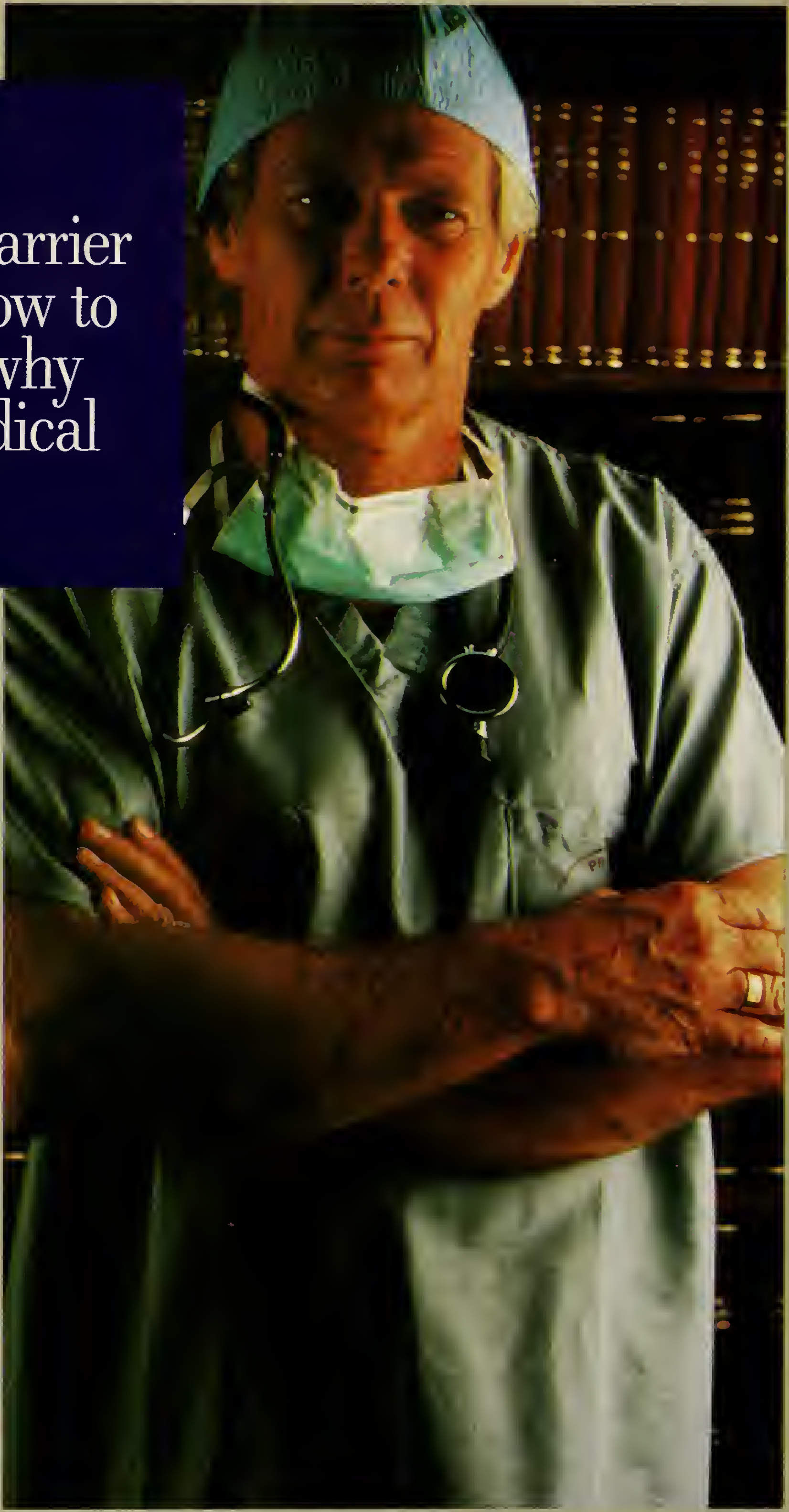
In Memoriam

■ Joseph E. Allen, M.D., died April 9, 1989 at the age of 81. Dr. Allen, an otolaryngologist, practiced medicine in Columbia for more than 33 years before retiring in 1973. He served in World War as a major. He obtained his medical degree at the University of Louisville School of Medicine in 1933. Dr. Allen was a member of the Boone County Medical Society.

■ Bernard J. Macauley, M.D., died August 23, 1988 at the age of 87. Dr. Macauley, an ophthalmologist, practiced medicine in Doniphan for many years before retiring in 1972. He obtained his medical degree at the University of Nebraska College of Medicine in 1926. Dr. Macauley was a member of the Butler-Wayne-Ripley-Carter County Medical Society.

■ Milton D. Overholser, M.D., died April 22, 1989 at the age of 88. Dr. Overholser, an anatomist, was a retired professor emeritus of anatomy at the University of Missouri-Columbia. He served as secretary of the Missouri State Anatomical Board for 30 years and was listed in Who's Who in America and in American Men of Medicine. He obtained his medical degree at the New York University School of Medicine in 1931. Dr. Overholser was a member of the Boone County Medical Society.

■ C.B. Schoeberl, M.D., died April 3, 1989 at the age of 70. Dr. Schoberl, an internist, practiced medicine in Joplin for almost 40 years before retiring in 1986. He served as football team doctor at Memorial High School for eight years. He obtained his medical degree at Creighton University in 1941. Dr. Schoeberl was a member of the Jasper County Medical Society.



"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."

At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

Medical School News

St. Louis University

St. Louis University Medical Center opened a state-of-the-art clinic for the comprehensive treatment of sinusitis and other sinus-related health problems.

The Comprehensive Sinus Clinic is the only one of its kind combining specialists in the field of allergy and immunology with those in otolaryngology to provide a more accurate diagnosis of sinus conditions. The combination of expertise allows a complete evaluation on whether to treat a condition medically or surgically.

Dr. Druce

Dr. Gladney

The clinic will be jointly headed by **Howard M. Druce, M.D., F.A.C.P.**, assistant professor of internal medicine in the division of allergy and immunology, and **John H. Gladney, M.D.**, professor of otolaryngology. The Comprehensive Sinus Clinic complements the Nasal and Paranasal Sinus Physiology Laboratory that opened in 1985.

The Center for Health Care Ethics, St. Louis University Medical Center, has been chosen by the National Conference of Catholic Bishops to prepare a revision of the "Directives for Catholic Health Care Facilities." The Directives are ethical and religious norms for some 1350 Catholic health care institutions in the United States.

To ensure that the proposed revision of the Directives are realistic and in accord with Catholic tradition, 17 internationally-renowned scholars and health care leaders met at St. Louis University Medical Center in April to lay the groundwork for revision.

This is the first time the "Directives for Catholic Health Care Facilities" have been revised since the National Conference of Catholic Bishops established them in 1971. Suggestions made at the conference will be sent to the Catholic bishops for final approval.

The *Sixth Annual Visiting Professor in Preventive Cardiology* lectures were presented at St. Louis University School of Medicine in April by **Jay Sullivan, M.D.**, professor of internal medicine and chief in the division of cardiology, University of Tennessee School of Medicine.

Dr. Sullivan presented three lectures titled "Hemodynamic and Hormonal Correlates of Salt Sensitivity in Humans;" "The Role of Diet in the Genesis and Treatment of Hypertension;" and "Coronary Risk Factors, Coronary Arteriography and Survival."

Dr. Sullivan is board certified in internal medicine with a subspecialty in cardiovascular disease. The Georgetown Medical School graduate is also a member of the National Board of Medical Examiners, and is an editorial consultant for eight publications including the *American Journal of Cardiology* and *The New England Journal of Medicine*. He is recognized as a consultant for the National Heart, Lung and Blood Institute and is the author of numerous publications.

Bethesda General Hospital announced the opening of its Premier-Care Neurorehabilitation Program. The unit provides comprehensive restorative care to individuals who have suffered various types of brain injuries. The 28-bed unit will be operated under contract byPremier Rehabilitation Centers of Massachusetts.

The Neurorehabilitation Program will be under the direction of **Camilo R. Gomez, M.D.** Dr. Gomez is assistant professor of neurology and director of the Stroke Resource Center of St. Louis University Medical Center. The practical coordination of all rehabilitative services will be handled by **Peggy Goulding, Ph.D.** Dr. Goulding has extensive experience in the rehabilitation of victims of brain injuries and will add a comprehensive dimension to the logistics of restorative care.

The University Hospital at St. Louis University Medical Center has tentatively received approval for an accredited ecumenical clinical pastoral education program. A three-person committee from the Association of Clinical Pastoral Education conducted a two-day, on-site review of The University Hospital in March. A written report will be sent to The University Hospital and the national accreditation committee will discuss the report and make a final decision by fall. The Hospital is a tertiary care and Level I trauma center, offering an excellent opportunity to chaplains of all faiths to learn how to properly minister to individuals and families in crisis situations.

St. Louis University Medical Center presented the largest number of clinical papers of any one medical institution in North America at the Ninth Annual International Heart Transplant Society scientific meeting in Munich, West Germany. The meeting focused on the latest developments in heart transplant procedures, mechanical devices as a bridge to transplantation, as well as the treatment of various infections associated with heart transplantation.

Presenting papers in Europe were: **D. Glenn Pennington, M.D.**, professor of surgery in the cardiothoracic division; **Leslie W. Miller, M.D.**, associate professor of internal medicine in the cardiology division; **Nancy Noedel**, heart transplant coordinator and **Jane E. Reedy, R.N.**, in the division of circulatory support.

In addition to the individual presentations, Dr. Pennington moderated a discussion on unusual indications for transplantation.

■ **James W. Fletcher, M.D.**, professor of internal medicine and director of the division of nuclear medicine, St. Louis University School of Medicine, has been appointed to serve as a member on the American Board of Nuclear Medicine. His three-year term begins in January.

Dr. Fletcher also serves as chief of nuclear medicine at St. Louis Veterans Administration Medical Center and as national program director for nuclear medicine for the department of Veterans Affairs in Washington, D.C. He also holds positions in several other professional organizations for nuclear medicine.

Dr. Fletcher received his medical degree from St. Louis University School of Medicine in 1968. He joined the faculty of St. Louis University in 1972 after completing his residency at Harvard Medical School in Boston.

■ Health professionals from St. Louis University Medical Center participated in the 1989 DuQuoin Health Fair in DuQuoin, IL The one-day event was held in April at the DuQuoin State Fairground Grandstand. Physicians participating included **Bernard R. Chaitman, M.D., Robert D. Wiens, M.D., John H. Gladney, M.D., and D. Glenn Pennington, M.D.**

■ **Maw-Shung Liu, D.D.S., Ph.D.** professor of physiology, St. Louis University School of Medicine, has been awarded a five-year, $613,265 renewal grant from the National Institute of General Medical Sciences. The grant supports a study that will explore septic shock and its effects on the liver.

Dr. Liu has received funding on this project since 1978. In addition to this grant, he has been supported by the National Heart, Lung and Blood Institute in a similar study dealing with the role of septic shock in heart failure.

Dr. Liu earned his dental degree at Kaohsiung Medical College in Taiwan and his doctorate in physiology from the University of Ottawa. Prior to joining the faculty of St. Louis University School of Medicine in 1982, he was assistant professor of physiology, Louisiana State University School of Medicine, and associate professor of physiology, Bowman Gray School Medicine at Wake Forest University.

■ **Mark M. Knueper, Ph.D.**, assistant professor of pharmacology, St. Louis University School of Medicine, has received a four-year, $533,481 grant from the National Institute on Drug Abuse. The grant will support research dealing with the effects of cocaine on the cardiovascular system.

Dr. Knuepfer earned his doctorate in pharmacology in 1981 from the University of Iowa. Prior to joining St. Louis University School of Medicine in 1986, he was a postdoctoral fellow and a research associate in the department of biomedical engineering at the Johns Hopkins University School of Medicine in Baltimore, MD.

■ Researchers have been awarded a $250,000 grant from the Warner-Lambert/Parke-Davis Pharmaceutical Research Division to study the effects of an anti-convulsant drug given to patients recovering from brain trauma. **Kenneth R. Smith Jr., M.D.**, professor and chief of neurosurgery at St. Louis University School of Medicine, will head the study.

Co-investigators for the study are **Richard D. Bucholz, M.D., William E. Rosenfeld, M.D., and Herbert Goldman, Ph.D. , and Peggy R. Goldfader, M.A.**

■ **Lynn A. Gershan, M.D.**, a fellow in neonatology at the Pediatric Research Institute of Cardinal Glennon Children's Hospital, has received a two-year, $62,250 Individual National Research Service Award from the National Institute of Arthritis and Musculoskeletal and Skin Diseases. The grant is awarded to continue advanced research training and is under the sponsorship of **Nicola C. Partridge, Ph.D.**, assistant research professor of pediatrics, and **Arnold J. Kahn, Ph.D.**, director of the Pediatric Research Institute. The Institute is located on the campus of St. Louis University Medical Center.

Dr. Gershan will use the postdoctoral fellowship award to study the hormonal regulation of certain enzymes which break down bone and investigate how this relates to the growth of animals and humans.

Dr. Gershan received her bachelor's degree in biology in 1979 at Adelphi University in New York. In 1984, she earned her medical degree from McGill University in Montreal.

University of Missouri-Kansas City

■ The School's third annual Research Days, April 21-22, yielded successful results in both student and faculty participation. Among the student award winners were **Charisse Soracco**, who won first place for a full paper on the topic of "Effects of Dipyridamole on Interstitial Fluid Adenosine Concentrations." Her collaborators were **C. G. Tribble, J. M. Gidday, L. Belardinelli, R. Rubio and R. M. Berne.** Three students also received awards for their oral presentations. **Charles Carey** was an oral-presentation winner for "Serum-B Endorphin Levels in Chronic Pelvic Pain Patients." His collaborators were **Mahmoud S. Ahmed, Ph.D., Dev Maulik, M.D., Ph.D., Richard Kirsch, Tom Stovall, and Frank Ling. Sarah Donnelli's** oral presentation for "Hemagglutinating Ability of the Oral Pathogan *Eikenella Corrodens*" also received an oral presentation award. Her collaborator was **Rona Hirschberg.** The remaining oral presentation award went to **David B. Griffin** for "Cell Attachment Activity of Bone Acidic Glycoprotein-75 (BAG-75): A New Noncollagenous Matrix Glycoprotein from Bone." His collaborator was **Jeffrey P. Gorrski.** In addition, faculty members' participation included the display of more than 20 poster sessions on a variety of topics. Keynote speaker **Richard Dubinsky, M.D.**, a UMKC graduate who currently is on the neurology staff of Kansas University Medical Center, focused on his own research area of "Dystonia."

■ **Louise Arnold, Ph.D.**, professor and director of the Office of Medical Education and Research, recently was elected vice chair of the Central Region of the Association of American Medical College's Group on Medical Education. The vice chair position is a one-year appointment, which will be followed by one year each as chair-elect, chair, and past chair. Her goals include shaping the Central Group on Medical Education into a regional and national resource network that will reach out effectively to medical educators. The central region encompasses 34 medical schools in 12 states and two Canadian provinces.

■ More than 600 participants are expected to participate in the third annual Sight-a-thon June 11, sponsored by the Eye Foundation of Kansas City. The Eye Foundation, which is affiliated with both UMKC School of Medicine and Truman Medical Center, also is holding an evening black-tie ball June 10 at the Hyatt Regency Hotel. Weekend activities will commemorate the opening of the facility's second floor, the uses of which will include clinical research.

■ Several UMKC faculty and staff members participated in a spring joint meeting of the Association of American Medical College's Central Region spring joint meeting of the Group on Student Affairs, the Group on Medical Education and the Organization of Student Representatives. Among the presenters were **Heidi Alderman, Ph.D.**, clinical assistant professor of Medical Education and Research, who participated in a panel discussion on academic support services, and **Louise Arnold, Ph.D.**, professor and director of the Office of Medical Education and Research, who was a group leader for a discussion on evaluating students on a clinical clerkship. **Loretta Loftus, M.D.**, associate professor and assistant dean for Evaluation was a panel member of the group discussing clinical clerkships and was a discussion leader for a group looking at medical education in the year 2000. In addition, **Julia Duckwall, Ph.D.**, research assistant professor, presented a poster on the continuing-care clinic, and **Kim Huggett** of the Council on Selection was a group leader for a workshop on recruiting medical students.

■ **Joseph C. Parker, Jr., M.D.**, professor and chairman of the Department of Pathology, made a Grand Rounds presentation on "Alzheimer's Disease" at Menorah Medical Center in Kansas City, Mo., and on "Autopsy Research in Alzheimer's Disease" for the Missouri Alzheimer's Disease Symposium in Kansas City, Mo.

■ **Julie Oki, Pharm. D.**, is co-author with **Catherine Emory, Pharm. D.**, of "Questions to Ask about Medications," which appeared in the *Kansas City Medical Guide*, published in 1989. Dr. Oki also presented "Cyclic Antidepressant Overdose — Update" for the Kansas City Fire Department K.A.R.E. Technicians, and in March, "Toxiciology of Cyclic Antidepressants" for the Emergency Medicine Conference at Bethany Medical Center, Kansas City, Mo.

■ **Edward R. Christophersen, Ph.D.**, clinical professor of pediatrics, is author of *The Baby Owner's Manual*, and the third edition of *Little People*, published in 1989 by Westport Publishers, Kansas City, Mo., and of "Injury Control," which appeared in *American Psychologist*, Vol. 44, No. 2.

■ **James S. Johnson, M.D.**, associate professor of obstetrics/gynecology, recently was honored for his service to the field of medicine by the Center for Black Leadership Development and Research.

■ **Richard Hellman, M.D.**, clinical associate professor of community medicine and family practice, presented a lecture at the 36th Postgraduate Course of the American Diabetes Association in Dallas on "The Physician's Role in Diabetes Education Program Development." He was also co-presenter of a workshop on "Assessment and Teaching Strategies in Diabetes Care."

■ **Uri Alon, M.D.**, associate professor of pediatrics, is primary author of "Intravenous Pyelography in Children with Urinary Tract Infection and Vesicoureteral Reflux," which appeared in the March 1989 issue of *Pediatrics*. He also is co-author of "Protein Intake and Renal Function of Children," which appeared in the February 1989 issue of the *American Journal of Diseases of Children*.

■ **Luz C. Racela, M.D.**, clinical associate professor of pathology, was named a member of the Inspection and Accreditation Committee of the College of American Pathologists.

■ **David S. McKinsey, M.D.**, clinical assistant professor of medicine, is primary author of "Megaloblastic Pancytopenia Associated with Dapsone-Trimethoprim Treatment of Nemocystic Carinii Pneumonia in AIDS," which appeared this year in the *Archives of Internal Medicine*.

■ **C. W. Chastain, M.D.**, clinical professor of community medicine and family practice, recently presented "Rural Health Care: A Christian Health System Perspective" at the annual meeting of the Christian Health Service Corporation in San Antonio, Texas.

University of Missouri-Columbia

■ **Karl D. Nolph, M.D.**, professor and chairman of nephrology, has been awarded an honorary fellowship in the prestigious Royal College of Physicians and Surgeons of Glasgow, founded in 1599 by King James VI of Scotland, who became King James I of England. Dr. Nolph, a world-respected kidney specialist, helped to pioneer a treatment for end-stage renal disease known as continuous ambulatory peritoneal dialysis or CAPD.

Dr. Nolph said he was "pleasantly surprised" to learn of the honor. At the induction ceremony April 3 in Glasgow, Dr. Nolph was introduced to the Royal College by a former MU nephrology fellow, **Dr. Robert Mactier**, who now works for the University of Dundee.

Dr. Nolph said he is truly honored, both for himself and for the University, to be admitted to the Royal College. "It shows that the University is involved in so many things worldwide."

■ **Kim S. Wise, Ph.D.**, associate professor of microbiology, received the 1989 *Chancellor's Award for Outstanding Faculty Research and Creative Activity in the Biological Sciences*. The award, which includes a $1,000 stipend and $2,000 to enhance research, was presented April 25 during the Faculty Recognition Award Ceremony on Campus. Dr. Wise, who came to MU in 1980 as an assistant professor, is working on five grant-supported research projects dealing with mycoplasmas, the smallest known free-living organisms. These microorganisms, which are mostly parasitic and occur usually in mammals, cause among other things walking pneumonia in humans and arthritis and pulmonary diseases in animals. Dr. Wise said he is interested in understanding the "physical and genetic mechanisms that these organisms use to change their cell surfaces to avoid destruction by host cells."

█ **Andrew Brown**, third-year medical student, has been accepted as a research fellow at Rockefeller University, making him the first and only winner from the Midwest. Brown will spend one year starting July 1 as a Pew Medical Fellow at the Center of Nutrition Excellence at Rockefeller. The New York City university, founded in 1981 by **John D. Rockefeller, Sr.**, is dedicated exclusively to research and graduate education. Pew Fellows get hands-on experience researching some aspect of human nutrition. Brown, one of only four people selected as fellows this year, said his research interest lies in the relationship between nutrition morbidity and mortality in surgery.

█ **Michael Cardwell, M.D.**, assistant professor of obstetrics and gynecology, and **Scott Snyder, M.D.**, assistant professor of OB/GYN and anesthesiology, have formed the Mid-MO OB/GYN Society, which will meet every other month in Columbia. This society is open to all OB/GYN physicians in mid-Missouri. The first meeting was March 16. Guest speaker **John A. Garbaciak, M.D.**, perinatologist and co-director of maternal-fetal medicine at St. Joseph's Hospital and Medicine Center in Phoenix, presented "Clinical Efficacy of Home Uterine Monitoring." Continuing medical education credits are available, sponsored by the University of Missouri-Columbia. For more information about speakers and meeting dates, contact Dr. Cardwell in the department of obstetrics and gynecology, N606 Health Sciences Center, Columbia, MO 65212 314/882-7937.

█ **Herbert Ferrari, M.D.**, clinical professor of anesthesiology, won a first-place award from the International Anesthesia Research Society for his scientific exhibit titled "Risk Prevention in Anesthesiology." Dr. Ferrari's exhibit was chosen from among 21 contestants at a meeting of the society in Orlando, FL in March.

█ **Greg Flaker, M.D.**, associate professor of cardiology, in April presented an abstract titled "Panic Attacks in Cardiology Patients" to the World Federation of Societies of Biological Psychiatry in Jerusalem.

█ **Michael H. Metzler, M.D.**, associate professor and chief of the division of general surgery, was selected to be the "Young Surgeon Representative from Missouri" to the American College of Surgeons' Young Surgeons meeting in Chicago in April.

█ The first *David G. Hall Symposium* will be held June 3 at the Holiday Inn Executive Center in Columbia. OB/GYN resident physicians will deliver short formal presentations on research topics. Guest speaker **Byron J. Masterson, M.D.**, from the University of Florida will speak on "Wound Construction in Gynecologic Surgery."

█ The MU department of psychiatry presented awards to three faculty members and two residents prior to the 11th annual *Kenneth F. Struessel Memorial Lecture* in April. **George Winokur, M.D.**, professor and chairman of the department of psychiatry at the University of Iowa presented a lecture on bipolar illness.

Joseph W. Lamberti, M.D., assistant professor, received the *Guhleman Award for Clinical Excellence* for the second time, Dr. Lamberti, who received his medical degree from the University of Ottawa in 1954, has been a member of the department since 1963. An internationally-recognized expert in sexual dysfunction and marital and family therapy, Dr. Lamberti is a fellow of the Royal College of Physicians and Surgeons of Canada and the American Psychiatric Association.

Armand R. Favazza, M.D., professor and associate chairman, and **Lori DeRosear, D.O.**, assistant professor were co-winners of the Residents' Award for Teaching Excellence.

Dr. Favazza is a pioneer in the study of self-mutilative behavior and is the author of the definitive book on that topic **Bodies Under Siege** published by the Johns Hopkins University Press in 1987. He has been a member of the MU faculty since 1973 and is a fellow of the American College of Psychiatrists and the American Psychiatric Association. Dr. Favazza earned his medical degree from the University of Virginia, Charlottesville, and holds a master's degree in public health from the University of Michigan, Ann Arbor. He also completed training in medical journalism at the Medill School of Journalism at Northwestern University.

Dr. DeRosear is a graduate of the Kirksville College of Osteopathic Medicine and joined the MU faculty in 1984. She had been a resident at MU. Dr. DeRosear is director of the department's medical student education program and has been active in residency teaching. She has been involved in collaborative research into panic disorder and has served in several posts for the Central Missouri Psychiatric Association.

Syed Shahid Mumtaz, M.D., was named outstanding senior resident, and **Lori R. Breedlove, M.D.**, won the outstanding junior resident award.

█ Several members of the department of family and community medicine participated in the 22nd annual Spring Conference of the Society of Teachers of Family Medicine (STFM) held in Denver in May. **Jack M. Colwill, M.D.**, professor and chairman, is president of STFM. The following department members participated in seminars and presented research at the meeting: **Gerald T. Perkoff, M.D., Robert L. Blake Jr., M.D., James D. Campbell, M.D., Bernard G. Ewigman, M.D., M.S.P.H., Larry Lawhorne, M.D., Steven C. Zweig, M.D., Robert Post, M.S., Joseph B. Stanford, M.D., Michael Hosokawa, Ed.D., Laurel Walter, and Elizabeth Garret, M.D., M.S.P.H.**

█ The MU Medical Alumni Organization honored six alumni and three friends of the school during the MSMA annual meeting in St. Louis in April.

The highest honor is the Citation of Merit that is annually presented to one MU medical school alumnus in recognition of the physician's contributions to the medical profession. This year **Lester W.**

Martin, M.D., professor of surgery and pediatrics at the University of Cincinnati College of Medicine, became the 32nd recipient of the Citation. Dr. Martin, who received his bachelor of science degree from MU's two-year medical school in 1947 and his medical degree from Harvard in 1949, is originally from Edwards, MO. Currently the director of pediatric surgery at the Cincinnati Children's Hospital, Dr. Martin is particularly well-known for his pioneering work on the surgical management of total colonic aganglionosis. In much of the world, his procedure for managing this condition is known as the "Lester Martin Operation."

Dr. Martin

Edward S. Baum, M.D., professor of clinical pediatrics at Northwestern University and a driving force behind the national Ronald McDonald House program, received a Service Award. Dr. Baum graduated from MU in 1967.

Jeanne and James Stephens, both M.D.s and 1935 graduates of MU, received Service Awards for their work bringing health care to the Ohio community in which they live and for their volunteer work in Kenya.

David T. Woodley, M.D., associate professor of dermatology at the University of North Carolina at Chapel Hill and a 1973 MU graduate; and **James W. Vardiman, M.D.**, associate professor of pathology at the University of Chicago and a 1970 MU graduate, received Outstanding Young Physicians Alumni Awards.

The following people were named Honorary Alumni of the MU School of Medicine: **Margaret Flynn, Ph.D.**, professor emeritus of family and community medicine at the school; **Philip C. Anderson, M.D.**, professor and chief of the MU division of dermatology; and **T.J. Cooper, M.D.**, immediate past-president of MSMA.

Washington University

Eric C. Beyer, M.D., will serve as Washington University School of Medicine's first McDonnell Scholar in Cancer Research.

Beyer, who will join the faculty July 1, recently was named a 1989 McDonnell Scholar by the James S. McDonnell Foundation's Program for Molecular Medicine in Cancer Research. His appointment brings with it a three-year, $375,000 grant that will enable him to pursue his research in oncology.

The McDonnell Foundation's program was established this year to develop physician-investigators who will apply techniques of modern biology to problems in clinical oncology. It supports young physicians who have demonstrated superior potential for original basic research as well as an interest in training in oncology.

Currently Beyer is an instructor of pediatrics at Harvard Medical School. He also serves as an assistant in medicine at The Children's Hospital and as a clinical associate at the Dana Farber Cancer Institute. Beyer received his doctorate in physiology and pharmacology in 1981 and his medical degree in 1982 from the University of California in San Diego. His postdoctoral training includes an internship and residency in pediatrics at The Children's Hospital, and a clinical fellowship in pediatric hematology and oncology at The Children's Hospital and the Farber Cancer Institute. He has received numerous awards and honors for his research, including the 1987 American Heart Association's Clinician Scientist Award.

Herman N. Eisen, M.D., an expert on immune system responses to disease, delivered the *12th Annual Oliver H. Lowry Lecture in Pharmacology* in May at Washington University School of Medicine in St. Louis.

Eisen, a former member of the Washington University faculty, is Whitehead Institute Professor of Immunology at the Massachusetts Institute of Technology (MIT). He has played a major role in defining the biochemical and molecular basis for the immune system's recognition and response to viruses, microorganisms and other disease-causing substances.

He was recruited to the Department of Dermatology at Washington University School of Medicine in 1955, and from 1960-73 served as professor and chairman of microbiology and immunology. He left St. Louis in 1973 to develop a program in immunology at the Massachusetts Institute of Technology.

The Lowry Lecture is sponsored by the Department of Pharmacology to honor **Oliver H. Lowry, M.D., Ph.D.**, distinguished professor emeritus and lecturer. Lowry served as head of the department from 1947-76 and as dean of the School of Medicine from 1955-58. Since February, he has been serving as interim head of the Department of Phamacology.

Dale Purves, M.D., professor of neurobiology at Washington University School of Medicine in St. Louis, has been elected to the National Academy of Sciences.

Purves is being recognized for his studies of the autonomic nervous system. He joined the Washington University faculty in 1973 as an assistant professor of physiology and biophysics. He was named a full professor in 1979 and is co-director of the School of Medicine's Sen. Jacob Javits Center of Excellence in Neuroscience, created in 1985 with a $3.4 million award from the National Institutes of Neurological Diseases and Stroke. In addition, he is presently editor-in-chief of the Journal of Neuroscience.

Maynard V. Olson, Ph.D., professor of genetics at Washington University School of Medicine in St. Louis, has been chosen as one of 12 members of the National Institute of Health's (NIH) Program Advisory Committee on the Human Genome.

Olson is associate director of Washington University's Center for Genetics in Medicine. Olson came to the School of Medicine in 1979 as an assistant professor of genetics, and was named professor in 1987. He received his doctorate in chemistry from Stanford University in 1969.

Eric J. Brown, M.D., has been named director of the newly created research section of the division of infectious diseases at Washington University School of Medicine in St. Louis. Brown is associate professor of microbiology and immunology, and of cell biology and physiology.

Brown will serve as co-director of the Division of Infectious Diseases with Gerald Medoff, M.D.

Brown joined the faculty in 1985 as associate professor of medicine and microbiology and immunology. He received his medical degree from Harvard Medical School in 1975, then served an internship and junior residency at Beth Israel Hospital in Boston. His postdoctoral training includes eight years with the laboratory of clinical investigation at the National Institute of Allergy and Infectious Diseases.

■ **Kenneth M. Ludmerer, M.D.**, associate professor of medicine at Washington University School of Medicine in St. Louis, has received a grant to continue his study of medical education in the United States.

The three-year grant, totaling $225,000, is from the Josiah Macy, Jr. Foundation and will enable Ludmerer to research and write a sequel to his book, "Learning to Heal: the Development of American Medical Education." That book, published in 1985 by Basic Books, a division of Harper & Row, covered the history of medical education in the U.S. from the mid-19th century to 1925.

Ludmerer is a graduate of the Johns Hopkins Medical School and also received a master's degree in history from the Johns Hopkins University. He majored in history and science as an undergraduate at Harvard University.

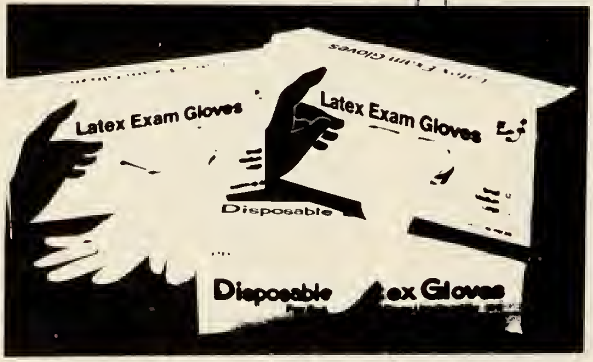
At Washington University, Ludmerer holds joint academic appointments in the School of Medicine and the Department of History.

■ **Andrew B. S. Muir, M.D.**, a research fellow in the Department of Pediatrics at Washington University School of Medicine in St. Louis, has been awarded a fellowship to support his research in diabetes.

The fellowship, one of only three awarded each year by the Institute of Pediatric Service of the Johnson & Johnson Baby Products Co., will begin July 1.

Muir, a second-year fellow in the division of endocrinology and metabolism, came to the School of Medicine in 1987. He received his medical degree in 1984 from the University of Toronto School of Medicine, and served an internship and residency at the Hospital for Sick Children in Toronto. He is a diplomate of both the Royal College of Physicians and Surgeons of Canada and the American Academy of Pediatrics.

Latex Exam Gloves
non-sterile AAA Quality exceed FDA standards
Special Offer $5.75 Per 100 pcs



Features:
* Beaded Cuff
* High Tensile Strength
* Natural Latex
* Lightly Corn Starch powdered
100 per box 20 to a case
All sizes S-M-L available - minimum order 1 case
Inventory Always on Hand for Immediate Delivery
Satisfaction Guaranteed If not fully satisfied, return the unused portion of your order for refund
Special Program for Distributors
U.S.C. ENTERPRISES, INC.
5313 Sheila Street
Commerce CA. 90040
Tel: 213-263-8888
213-263-9382
213-263-9699

Classifieds

Physicians Wanted

PEDIATRIC OR RETINAL OPHTHALMOLOGIST, Kansas City. Fellowship-trained pediatric-strabismus or retinal ophthalmologists to join board certified generalists and establish first subspecialty department. Ultramodern office with state-of-the-art equipment and vigorous growing practice. Some general ophthalmology until subspecialty established. Ethical. Stimulating environment-clinical research — 40 papers published from our practice. Exceptional offer — salary, fringes, production incentive. Contact: John C. Hagan, III, M.D.,FACS, Midwest Eye Institute of Kansas City, 2700 Hospital Drive, North Kansas City, MO 64116.

ONE PSYCHIATRIST — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board certified or eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, board certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). For information contact: Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

FAMILY PRACTICE — HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hospital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar opportunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435, 612/835-5123.**

FAMILY PRACTICE for single-specialty group in Ozark Mountain Country. Excellent opportunity in clinic. Guaranteed minimum. For information contact: Sandra Mizell, Office Manager, at 417/256-2111.

FAMILY PRACTICE — Acute care facility in Central Iowa seeks family practitioner to join group. Thriving practice; two clinics with strong hospital support. Call coverage and backup excellent; obstetrics required. Hospital and clinics well-equipped and have spacious facilities. Desirable community, offering competitive income and benefits. Call Michael Krier, 1-800-332-0488.

FAMILY PRACTICE/INTERNAL MEDICINE — Attractive opportunities for BC/BE Family Practice and Internal Medicine Physicians in a variety of settings in the Midwest (many on lakes). Contact Bob Strzelczyk to discuss your practice requirements and these positions. **STRELCHECK & ASSOCIATES, INC.;** 12724 N. Maplecrest Lane; Mequon, WI 53092; 1-800-243-4353.

MISSOURI: EMERGENCY DEPARTMENT PHYSICIAN: Southeast Missouri Hospital, a modern, full-service, 281-bed, JCAH approved regional medical center and Level II Trauma Center, is currently seeking a fifth full-time Emergency Physician. Emergency Department census is greater than 15,000 annually. Our non-profit community hospital has all major medical and surgical sub-specialties represented and is in the only major regional referral center between St. Louis and Memphis offering a Regional Heart Program with open heart surgery, obstetrical services, a free standing cancer center, full service pediatrics with intensive care and neonatal units, and a progressive Emergency Department with aeromedical services. Working and living conditions are excellent in this university community of 40,000 + with recreational areas in a close proximity. We seek a candidate committed to a career in Emergency Medicine. Experience in Emergency Medicine is required. We offer a competitive salary and excellent fringe benefits including four weeks vacation and two weeks educational leave. Please send CV to: Director of Personnel, Southeast Missouri Hospital, 1701 Lacey, Cape Girardeau, MO 63701 or phone 314/651-5621.

OCCUPATIONAL/MINOR EMERGENCY MEDICINE — full-time physician needed to staff a busy, freestanding, St. Louis area ambulatory care center with industrial contracts. Compensation terms are negotiable. Our physicians are aware of this opening. Confidential inquiries to #30, c/o MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

DIAGNOSTIC RADIOLOGIST — Competitive salary and early partner-

Physicians Wanted

ship. Busy practice includes 100-bed general hospital and multispecialty clinic. Competence in all modalities except MRI. Dan Sullivan, M.D. or John Morgan, M.D., 3525 S. National, Suite 110, Springfield, MO 65807.

E.R. PHYSICIANS/PART-TIME — Liberty Healthcare Corp., a 12-year-old medical management corporation, has part-time positions available in moderate volume ERs in several facilities in the midwest. We offer competitive salary and paid malpractice. Shifts available to suit your particular schedule. We seek physicians with E.R. experience. If you are a 2nd-year EM resident, 3rd-year FP or IM resident, Liberty Healthcare can provide you with worthwhile, rewarding part-time career opportunities. For more information, call E.R. specialist, Annamarie Alleva, 1-800-331-7122 toll free or send C.V. to: **Liberty Healthcare Corp.**, Dept 0, 399 Market Street, Philadelphia, PA 19106. EOE.

FAMILY PRACTICE/INTERNIST. Have a large solo practice in fast-growing St. Charles County, looking for partner. Close to 4 hospitals. Office space also available. Call 314/272-5454 from 1:00 p.m. to 5:00 p.m. weekdays except Wednesday. Address: 1001 Highway K, O'Fallon, Missouri 63366.

INTERNIST - IOWA Pella Medical Center seeks BC/BE physician to join its group of five FPs, one IM, one surgeon. 40 miles SE of Des Moines, this charming Dutch community has excellent 47-bed hospital. Guaranteed first-year salary, full benefits, an outstanding compensation package. Contact Mary Jo Cordes, MDSEARCH, P.O. Box 16458, St. Paul, MN 55116. Call collect 612/454-7291.

SOUTHEASTERN IOWA - Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

Equipment for Sale

MEDICAL OFFICE EQUIPMENT from ambulatory care center, that includes laboratory and X-ray equipment, audio booth, Holter Monitor and large trash compactor. Used 1 ½ years. If interested call 417/869-7006. Ask for Sybil.

MEDICAL EQUIPMENT - Exam tables (pediatric and adult), Operating room lights, scrub sinks, large autoclave, guerney, hospital beds. If interested, call 314/686-4407 or 314/686-2973.

Services

PHYSICIANS. PROVIDER PLACEMENT SERVICES specializes in the relocation of physicians throughout the U.S., with special emphasis in the southeast. Currently, we have several hospitals/clinics/groups with openings. All fees paid by employer. All inquiries kept in strict confidence. No obligation. Send CV/Resume to: PPS, ATTN: Mr. Scott, 2221 University Blvd., West, Jacksonville, FL 32217, or call toll free 1-800-848-8722.

Investment

$5,000-$60,000: FOR PHYSICIANS — Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including Taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Practice for Sale

FOR SALE, GENERAL PRACTICE, gross $200,000/year; 90% third party pay. Retiring after 40 years successful medical practice. Solo or group. Fully equipped brick medical building with income from rentals also for sale, or rent with option to buy after 1 year. St. Louis suburb, P.O. Box 5711, St. Louis, MO 63121.

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.**, P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts can be typewritten, double-spaced, and the original with one copy submitted. Alternatively, we can accept the manuscript on either a 5¼" or 3½" floppy disk (IBM compatible), created with any word-processing application that produces formatted or text-only files. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials and Letters

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing. Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Army Reserve 314A

Dodson Insurance 329

Eli Lilly 314B

Empire Casualty Company 330

Forrest T. Jones 320

Fred S. James 324

I.C. System 332

Insurance Corp. of America 172-173

INTRAV 358

Jackson & Coker 347

Key Pharmaceuticals 343-344

Medical Defense Associates 322

Medical Protective Company 317,352

Merck, Sharp & Dohme 363-364

Missouri Dept. of Health 326

MOMEDICO 306

Palisades Pharmaceuticals 329

PIE Mutual Insurance Company 362

Professional Data Services 310

Roche 313

Risk Control Associates 308

Timberlawn 343

United Missouri Banks 314

U.S.C. Enterprises, Inc. 358

Wes Woodbury 343

WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, PIE Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality. PIE Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

Physician Managing Boards, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

Quality Rated Insurance Program: a modified claims-made plan which works in the physician's favor to reward loss-free physicians and provides added protection not available in other policies.

A Financially Sound Reinsurance Program with Lloyd's of London, the world's most prestigious reinsurer.

An Aggressive Defense Team, experienced in all types of medical liability claims and willing to fight for your cause.

Mutual
Insurance
Company
PIE

If your standards match ours, let's talk business.

The PIE Mutual Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth St., Cleveland, OH 44114
(216) 781-1087

SO WE CAN HOLD THE PREMIUMS DOWN.

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

VASOTEC®

(ENALAPRIL MALEATE | MSD)

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor

Warnings: *Angioedema* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms Angioedema associated with laryngeal edema may be fatal **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident.

If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary

Neutropenia/Agranulocytosis. Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered

Precautions: *General: Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy In such patients, renal function should be monitored during the first few weeks of therapy

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic This is more likely to occur in patients with preexisting renal impairment Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION)

Hyperkalemia Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy Hyperkalemia was a cause of discontinuation of therapy in 0 28% of hypertensive patients In clinical trials in heart failure, hyperkalemia was observed in 3 8% of patients, but was not a cause for discontinuation

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC (See *Drug Interactions*.)

Surgery/Anesthesia In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients.

Angioedema Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension. Patients should be cautioned to report lightheadedness especially during the first few days of therapy If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician

Hyperkalemia Patients should be told not to use salt substitutes containing potassium without consulting their physician

Neutropenia Patients should be told to report promptly any indication of infection (e g , sore throat, fever) which may be a sign of neutropenia

NOTE As with many other drugs, certain advice to patients being treated with enalapril is warranted This information is intended to aid in the safe and effective use of this medication It is not a disclosure of all possible adverse or intended effects

Drug Interactions.

Hypotension: Patients on Diuretic Therapy Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION)

Agents Causing Renin Release. The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g , diuretics).

Other Cardiovascular Agents. VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium. VASOTEC attenuates potassium loss caused by thiazide-type diuretics Potassium-sparing diuretics (e g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently

Pregnancy—Category C. There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose) Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline Enalapril was not teratogenic in rabbits However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose)

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters

There are no adequate and well-controlled studies in pregnant women VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate It is not known whether this drug is secreted in human milk Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother

Pediatric Use Safety and effectiveness in children have not been established

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 298/ patients

Hypertension. The most frequent clinical adverse experiences in controlled trials were headache (5 2%), dizziness (4 3%), and fatigue (3%)

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1 4%), rash (1 4%), cough (1 3%), orthostatic effects (1 2%), and asthenia (1 1%).

Heart Failure The most frequent clinical adverse experiences in both controlled and uncontrolled trials were dizziness (7.9%), hypotension (6 7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2 1%), and diarrhea (2 1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were fatigue (1 8%), headache (1 8%), abdominal pain (1 6%), asthenia (1 6%), orthostatic hypotension (1 6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1 3%), vomiting (1 3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1 2%)

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0 5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category

Cardiovascular Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), cardiac arrest, pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis

Nervous/Psychiatric Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia

Urogenital Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy

Respiratory Bronchospasm, rhinorrhea, asthma, upper respiratory infection

Skin Herpes zoster, pruritus, alopecia, flushing, photosensitivity

Other Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur These symptoms have disappeared after discontinuation of therapy

Angioedema Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately (See WARNINGS)

Hypotension. In the hypertensive patients, hypotension occurred in 0 9% and syncope occurred in 0 5% of patients following the initial dose or during extended therapy Hypotension or syncope was a cause for discontinuation of therapy in 0 1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients Hypotension or syncope was a cause for discontinuation of therapy in 1 9% of patients with heart failure (See WARNINGS.)

Clinical Laboratory Test Findings.

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia

Creatinine, Blood Urea Nitrogen. In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis (See PRECAUTIONS) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients

Hemoglobin and Hematocrit Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists In clinical trials, less than 0 1% of patients discontinued therapy due to anemia

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported

Liver Function Tests Elevations of liver enzymes and/or serum bilirubin have occurred

Dosage and Administration: *Hypertension*. In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed

If the diuretic cannot be discontinued, an initial dose of 2 5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day Dosage should be adjusted according to blood pressure response The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS)

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL) For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses The maximum daily dose is 40 mg Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response (See WARNINGS)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1 6 mg/dL, therapy should be initiated at 2 5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b i.d , then 5 mg b i.d and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function The maximum daily dose is 40 mg

For more detailed information, consult your MSD representative or see Prescribing Information Merck Sharp & Dohme, Division of Merck & Co., Inc , West Point, PA 19486

J6VS18R(815)

MSD
MERCK
SHARP&
DOHME

IT MAY CHANGE THE WAY YOUR PATIENTS FEEL ON ANTIHYPERTENSIVE THERAPY

MSD
MERCK
SHARP&
DOHME

FOR MANY HYPERTENSIVE PATIENTS
START WITH ONCE-A-DAY

VASOTEC®

(ENALAPRIL MALEATE | MSD)

For a Brief Summary of Prescribing Information,
please see next page of this advertisement

Copyright © 1987 by Merck & Co., Inc.

J6VS18R

EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

Journal of the Missouri State Medical Association

July 1989

[illegible]
[illegible]
[illegible]
JUL 3 1989

[redacted]

You didn't go into medicine to become a human target.

Every day you put your reputation and practice on the line. And, with the increasing barrage of malpractice claims, your business has become a virtual firing line.

Now, you can do something about it. Protect yourself with MOMEDICO. We're the only physician owned professional liability insurance company founded and endorsed by the Missouri State Medical Association. MOMEDICO is a stock insurance company rather than a mutual assessable company. The overwhelming majority of our stock and policy holders are Missouri physicians.

At MOMEDICO we are proud of our reputation for highly trained and totally committed field service representatives. Our reputation for results is outstanding, too. Of all cases handled to conclusion, over 80% were closed without any payment of indemnity. So, if you find yourself on the firing line, MOMEDICO is the company that lines up to protect you.

MOMEDICO. . .the best company a physician can keep.

MOMEDICO

Better Protection. Together.

10795 Watson Road
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

JUL 21 1989

Contents

Missouri Medicine

Editor	Donald G. Sessions, M.D.
Associate Editor	Ramona M. Chapman, M.D.
Editor Emeritus	Jordan W. Burkey, M.D.
Managing Editor	Susan Flanigan Gold
Editorial Assistant	Valerie A. Peters

Editorial Board

Anesthesiology	Mark G. Zukaitis, M.D.
Cardiovascular Surgery	Jack J. Curtis, M.D.
Dermatology	Philip C. Anderson, M.D.
	John DeSpain, M.D.
	Ernest Lorenc, M.D.
Emergency Medicine	David M. Trantham, M.D.
Family Practice	William D. Bradshaw, M.D.
	Carl R. Kruse, M.D.
	Kirby L. Turner, M.D.
Gastroenterology	Jay P. Marshall, II, M.D.
Hematology	William H. Crosby , M.D.
Internal Medicine	John S. Daniels, M.D.
	Stephen Hamburger, M.D.
	Robert K. Skillman, M.D.
Neonatology	Elizabeth J. James, M.D.
Neurosurgery	Keith Rich, M.D.
Obstetrics and Gynecology	James Daly, M.D.
Oncology	Michael C. Perry, M.D.
Ophthalmology	John C. Hagan, III, M.D.
	F. Thomas Ott, M.D.
Orthopedics	William P. Thorpe, M.D.
Otorhinolaryngology	J. Regan Thomas, M.D.
Pathology	Scott A. Martin, M.D.
Pediatrics	R. Don Blim, M.D.
Physical & Rehabilitation Medicine	Paul E. Kaplan, M.D.
Plastic Surgery	Leroy Young, M.D.
Psychiatry	William F. Clary, M.D.
	J.C. Corvalan, M.D.
Radiation Therapy	MacDonald B. Logie, M.D.
Radiology	Donald R. Germann, M.D.
General Surgery	Mark S. Cotner, M.D.
	Richard O. Craig, M.D.
	Donald Silver, M.D.
	Michael Metzler, M.D.
Vascular Surgery	Kirt Nichols, M.D.
Urology	George M. Austin, M.D.

Publications Committee

Chairman	Donald G. Sessions, M.D.
Vice-Chairman	Ramona M. Chapman, M.D.
Members	Jack J. Curtis, M.D.
	John S. Daniels, M.D.
	Stephen Hamburger, M.D.

Cover

'Boys Fishing', 28" x 36" oil painting by **Lisa Ford**, a portrait artist in *Columbia, Missouri*. This piece is in the private collection of **David C. Mechlin, M.D.**, an otolaryngologist in private practice in *Columbia, Missouri.*

Guest Editorial

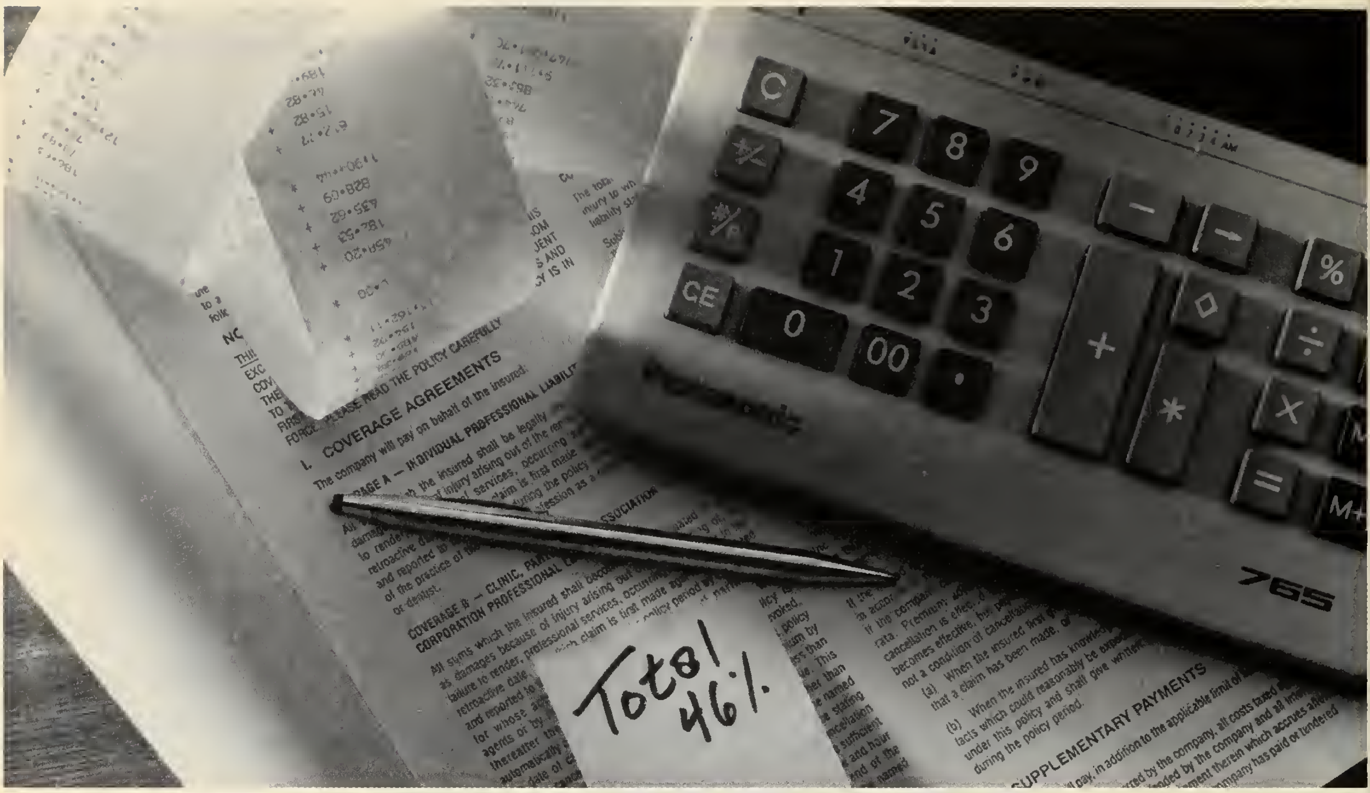
375 **Patients, Profits and Progress**
Michael C. Perry, M.D., *Columbia, MO*

1989 Annual Convention

378 **Minutes of the House of Delegates**
389 **Presidential Inauguration Speech**
393 **President's Message**
395 **Auxiliary Report**
399 **Resolutions**
405 **Courtesy Resolution**
406 **Committee and Commission Reports**
413 **Convention Registration**
417 **Summary of Council Minutes**
420 **Missouri State Medical Foundation**
421 **Exhibitors**

Departments

370 Progress Notes
373 Editor's Desk
423 Medical School News
427 New Members
428 Physicians Recognition Award
429 CME
434 In Memoriam
435 Classifieds
437 Information for Contributors
437 Advertising Index



Introducing Claims Paid Coverage From Risk Control Associates

Save Up to 46% on Your Premiums with Guaranteed Rates for 3 Years!

Cut Your Liability Insurance Costs Up to 46% With Our NEW Claims Paid Coverage. If you are tired of the high cost of Medical Liability Insurance, now there is something you can do about it. It's called **Claims Paid** coverage, and it can cut your premium costs up to 46%. **And we guarantee a level premium for 3 years if you join now!**

Claims Paid is a bold new concept in medical liability coverage. It offers the benefits of full protection at a fraction of the cost. Risk Control Associates is the only company to offer this innovative plan to the physicians and dentists of Missouri.

Our New Claims Paid Policy is Designed for Maximum Protection at a Much Lower Premium. Risk Control Associates can offer reduced premiums for **Claims Paid** policies because premiums are based on money actually paid out. And **Claims Paid** Insurance is available in the same coverage options as Occurrence and Claims Made policies.

If you are currently insured under one of our other policies, you can easily convert your coverage to **Claims Paid.**

Risk Control Associates is a Leader in Innovation and Services. Risk Control Associates is Missouri's leader in the Medical Liability Insurance field. We are owned and managed by physicians, so we know what is important to you. We understand your need for maximum protection and excellent service. And we deliver both. We are "Physicians Helping Physicians."

For more information about our new **Claims Paid** Policy, call for our free brochure, "Understanding Claims Paid Medical Liability Insurance" or ask to speak with a company representative. Our phone number is (800) 422-5122. We will be glad to answer any questions you may have.

You can start saving up to 46% on your insurance premiums right away, **so contact us today.** It will mean significant savings to you and an excellent investment in your future.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS

Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

1111 S. Glenstone • Suite 3-102
Springfield, Missouri 65804
(800) 422-5122 • (417) 862-0650

Missouri Medicine

Vol. 86, No. 6 *Journal of the Missouri Medical Association* July 1989

MSMA PHONE BOOK

Missouri State Medical Association	314/636-5151
American Medical Association	312/645-5000
MSMA Physicians' Health Program	314/768-4990
MOMEDICO	1-800-392-8039
Dodson Insurance Group	1-800-825-3760
MSMA Retirement Plan/ Prudential-Bache Securities	1-800-877-9200 314/721-9200
Forrest T. Jones	1-800-892-7272
Fred S. James	KC 1-800-892-7105 St. Louis 1-800-445-9513
Health Care Financing Administration	816/426-5233
INTRAV	314/727-0500
Medicaid Provider Relations	1-800-392-0938
Medicare Provider Relations	1-800-392-3070
Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
Missouri Department of Health	314/751-6400
Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	(Preadmission) 1-800-392-8060 (General info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs	314/751-8042
Missouri State Board of Registration of the Healing Arts	314/751-2334

MSMA Officers

President	Marvin A. Singleton, M.D., *Joplin*
President-Elect	Gary A. Dyer, M.D., *St. Joseph*
Secretary	Norman P. Knowlton, III, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Clarence A. Martin, M.D., *Joplin*
Vice President	Jack Kayes, M.D., *St. Louis*
Vice President	Barbara Buchanan, M.D., *Kansas City*
Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*
Vice-Speaker	James B. Wolfe, M.D., *Springfield*

Councilors

Dorothy D. Reister, M.D., *Shawnee Mission,* Chairman
Carol F. Williams, M.D., *St. Louis*, Vice Chairman

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *Florissant*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Peters*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A.J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Robert T. Gibbons, Jr., M.D., *Overland Park, KS*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Ms. Laura Carlson, medical student, *Kansas City*
Charles Barbee, M.D., *Columbia*
Charlene Prather, M.D., *Kansas City*

Vice Councilors

Robert Schaaf, M.D., *Gower*
Carl R. Kruse, M.D., *Palmyra*
Meredith C. Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Jay Yedlin, M.D., *Kansas City*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Ms. Lora Mills, medical student, *Columbia*
Paul Petruska, M.D., *St. Louis*
Carla Siegfried, M.D., *St. Louis*

AMA Delegates

Robert R. MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*
George Bohigian, M.D., *St. Louis*
Melvin C. Kasten, M.D., *Cape Girardeau*
Keith Ashcraft, M.D., *Kansas City*
Vernon Balster, M.D., *St. Louis*
Walter German, M.D., *Springfield*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251
Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 6S102.
Subscription rates: $20 per year.
Second class postage paid at Jefferson City, Missouri and at additonal mailing offices.
Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.
Copyright 1989 by the Missouri State Medical Association. All rights reserved. Publication number 3SS380.

HMO proposed rule in *Missouri Register*

The May 1, 1989 *Missouri Register* contained extensive information on the proposed rule 4 CSR 190-11.120 Financial Standards for Health Maintenance Organizations.

Briefly, HMOs in Missouri most likely will be required to hold 2% of their annual premium revenue as capital by 1991.

The Missouri Division of Insurance is expected to approve regulations this month to enact stronger net worth requirements for HMOs. In the past, some HMOs have been allowed to operate with a negative net worth, generally meaning that liabilities exceeded assets. Now according to the proposed regulations, HMO assets will have to exceed their liabilities.

A spokesman for the HMO industry said the plans do not oppose the proposed regulations. ■

ICD-9 grace period extended

HCFA has extended indefinitely the grace period for the Part B diagnosis coding requirement. While the requirement to code still remains, penalties or denials will not be assessed for incorrect codes or the failure to supply them. Educational efforts will continue to ensure correct coding.

It is important to link the diagnosis codes in block 23, Health Insurance Claim Form 1500, to the procedures that are listed in block 24, (e.g., office or hospital visits, endoscopy, etc.). Proper coding will ensure a reliable data base and correct and timely reimbursement.

Medicare Part B/General American is always available for consultation. If you have questions contact: Laurel Ruzas, Manager, Medicare Medical Review/Professional Relations, 314/525-5526 or Frank R. Mohs, Medicare Medical Director, 314/525-5535. ■

Tort reform update

The Committee to Preserve Health Care (composed of the Missouri State Medical Association, Missouri Hospital Association, Hospital Services Group and Missouri-based physician professional liability insurers) met with the Missouri Association of Trial Attorneys (MATA) in June to discuss the future status of the tort moratorium as part of the original agreement with MATA. Both parties seemed inclined to discuss a few refinements to the legislation enacted four years ago and to extend the moratorium for an additional period of time. Currently, specific refinements are being identified for discussion by the committee and MATA. ■

DOH announces appointments

Larry Jones, M.S., is serving as Acting Director of the Department of Health (DOH) Division of Maternal, Child and Family Health (MCFH). He temporarily replaces Deanna Severance, R.N., M.S., who resigned in June to become Director of the Frontier Nursing Service in Hyden, Kentucky. Larry has been Deputy Division Director since July 1, 1988.

In addition Dean Perkins, D.D.S., has been appointed as Acting Assistant to the Director of the Division of MCFH. Dean has been with the MCFH Bureau of Dental Health since September 23, 1985. ■

June 3 Council meeting highlights

The MSMA Council met June 3 at the Holiday Inn at the Lake of the Ozarks. Highlights of the meeting include:

- Approved MSMA recruitment of "local-only" members for the Federation.
- Rescinded last year's membership recruitment plan.
- Approved the 1993 Annual Meeting dates of March 31-April 4 at Tan-Tar-A.
- Voted to nominate, along with SLMMS, James Whittico, M.D., for the Benjamin Rush Award.
- Approved Dr. Singleton's recommendation that certain agencies and organizations, including the Departments of Health and Social Services, and Silver-Haired Legislature, be approached for their ideas on Medicaid reform, tort reform, etc.
- Voted to refer the study of member

benefit insurance plans back to the Task Force on Member Benefits, in order to decide whether to offer additional plans. Report to be made in August.

- Voted to study the feasibility of holding screening clinics at the Capitol.

- Voted by ballot to change Council meeting times to Saturday night/ Sunday morning from the current format of Friday night/Saturday morning.

- Voted to obtain information from liability carriers regarding timely filing (within 90 days) of expert witness affidavits.

- Voted to urge Missouri Medicaid to adopt Medicare carrier codes for type of service and place of service and further that the legislature be requested to institute this coding system.

- Directed and authorized the HMSS to look into bylaws provisions for hospital disciplinary actions taken after Board of Healing Arts has acted.

- Appointed Councilor-Advisors to MSMA committees as follows: Continuing Education, David Barbe; Medical Economics, William Hufaker; Medical-Legal, Stephen Vilmer; Interspecialty, Robert T. Gibbons and Public Affairs, David Hall.

- The following physicians were appointed to the Sunsetting Committee: Duane Hellam, chairman, Jerry Murrell, Mel Kasten, David Wilkinson and Charlene Prather. ■

MSMA meets with Governor

Several groups including MSMA attended a June 14 meeting in the Governor's Office to discuss the special legislative session that will convene July 5. Along with Governor Ashcroft, Sen. Jim Mathewson (D-Sedalia), president pro tem of the Senate, and Rep. Bob Griffin (D-Cameron), speaker of the House, assured those present that the need for a tax increase is real. The Governor's proposed Fiscal Year 1990 Budget cuts will be made if legislation to provide an additional $130-$150 million in revenue is not adopted by July 13.

Currently, a 20-person legislative committee is developing the new tax proposal. Sen. Mathewson and Rep. Griffin agree that they will support this committee's recommendations. The Governor stated that he will sign any tax increase that the General Assembly presents him by July 13.

All present realize that many legislators oppose tax increases because they believe their constituents oppose any tax increase.

Therefore, from the feedback received at this meeting, **MSMA urges all members to contact their state senators and representatives, asking them to support the recommendations for increased taxes that will come from the study committee.** ■

Infectious waste bulletin available

Confused about the infectious waste guidelines? The Missouri Department of Natural Resources (MDNR) offers a bulletin titled "Management of Infectious Waste by Small Quantity Generators" at no charge. Write or call MDNR, P.O. Box 176, Jefferson City, MO 65102 314/751-3176. ■

MSMA workshops

The following workshops presented by Conomikes and Associates have been scheduled by the MSMA. For more information, contact the Association at 314/636-5151.

ICD-9 Coding: August 1, St. Louis; August 2, Springfield; August 3, Kansas City.

How to Run a More Profitable Practice: October 12 & 13, locations to be announced.

Medicare Update/Medical Necessity: November 7, 8 & 9, locations to be announced. ■

McIntyre featured in KC paper

Former MSMA Executive Vice President Raymond McIntyre of Jefferson City was the focus of a June 9 feature in *The Kansas City Times*.

In "The midlands" by columnist James J. Fisher, McIntyre's high school basketball career in Oregon, MO, was highlighted in the story "Tiny team won it all at state." McIntyre was a member of the Oregon team that won the Missouri state basketball championship in 1928. He picked the Detroit Pistons to win the National Basketball Association championship against the Los Angeles Lakers — a feat the Pistons accomplished on June 13.

McIntyre worked for MSMA from 1942 until his retirement in 1977, although two of those years were spent in the service. In 1977, McIntyre won the Jefferson City YMCA 's basketball free throw contest, beating former Mizzou quarterback Mike Farmer, then 26.

McIntyre continues to visit the MSMA office on a regular basis. ■

P.I.P. Breakdown for 1989

The P.I.P. Program continues to see improvement each year with increased involvement. This year, physicians, spouses, students and others visited Jefferson City on 16 Wednesdays during the General Assembly.

St. Louis was the big winner in the participation category, with 46 physicians, two spouses, two students, one county executive and one undesignated visitor making the trip to the Capitol city. Springfield had 10 physicians and one spouse pay a visit, while Kansas City sent seven physicians and one county executive to participate.

Rounding out the participants, Columbia was represented by six physicians, St. Joseph and Cape Girardeau by three, and Jefferson City by one. Other areas of the state sent 15 physicians and two spouses to show their support, bringing the grand total of participants to 101. Those numbers look good, but there is still much to be done and the medical profession needs your help. Get involved. When the General Assembly revs up next session, make plans to be there to make your voice heard. ■

MSMA resolutions come before AMA

Six MSMA resolutions were among the 278 considered and acted upon during the late June meeting of the AMA House of Delegates. The national body also made decisions on 70 reports from the Board of Trustees and various councils.

Action on Missouri resolutions included:

●Resolution 41 (Prospective Payments to Hospitals) and Resolution 42 (Equal Reimbursement under Medicare) were considered in conjunction with the Council on Medical Service Report G and several similar resolutions. The House adopted Report G, which calls for setting a floor for all Medicare services at 80% of the national average prevailing fee for those services.

●Also, the House adopted Substitute Resolution 82 which reaffirms AMA policy "that geographic variations under a Medicare payment schedule reflect only valid and demonstrable differences, especially medical liability premiums, in physician practice costs, with further adjustments as needed to remedy demonstrable access problems in specific geographic areas."

●Resolution 43, which asked the AMA to enlist the support of state medical associations to establish a grass roots coalition to enact comprehensive clean ambient air legislation, was combined with several resolutions and adopted as Substitute Resolution 43. As passed, the resolution directs AMA to work with Congress, other medical associations and interested groups to achieve a comprehensive national policy and program to address the adverse health effects from environmental pollution factors, including air and water pollution, toxic substances, the 'greenhouse effect,' stratospheric ozone depletion and other contaminants.

●Missouri's Resolution 44, which asks the AMA to urge physicians to contribute 50 hours per year for care of the poor and to report these hours to AMA so they could be forwarded to Congress, was referred to the Board for action. The Board will now consider how or if such a program could be structured to be effective.

●Resolution 45 called upon the AMA to urge Congress to increase the excise tax on tobacco products and earmark the funds to pay for health care costs of tobacco use. Present AMA policy calls for such funds to be used to stabilize the Medicare trust fund and the House adopted a Substitute Resolution 45 which read: "Resolved, that the AMA reaffirm its policy urging the Congress to increase the tax levy on tobacco products."

●Resolution 46 asked the AMA to urge Congress to enact legislation to exempt physicians and physician organizations from antitrust laws and enact legislation to allow a physician to be represented by his/her state, local or specialty society in negotiating fair and equitable fees with third parties. The resolution was combined with several similar proposals plus Board of Trustees Report YY. The House adopted Report YY which details the AMA's current activities delaing with antitrust issues as well as the Board's planned consideration of legislation amending the National Labor Relation Act to protect physicians' rights to negotiate collectively where appropriate and necessary.

●In lieu of Resolution 46, the House adopted Resolution 30, which calls upon the Board to investigate the matter of third party payor anticompetitive activity and initiated any needed action to achieve fair competition and more level playing field between bulk purchasers of health care services and the providers of those services.

In other activities of interest, George M. Bohigian, M.D., a Missouri delegate from St. Louis, was edged out in his bid for the AMA Board of Trustees. With seven candidates running for four open slots on the Board, Dr. Bohigian finished a close fifth. ■

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

In order to care for our patients with AIDS we are going to have to learn more about it. We are going to have to study it and talk about it and take care of our patients who have it.

AIDS — It Won't Go Away

I was at the operating table doing an elective case yesterday. We were closing and as usual the conversation had switched from surgical pathophysiology to talk about more mundane aspects of life. During this idle chatter someone mentioned that a contemporary colleague was retiring. "How great for him," I thought. It turned out that it wasn't so great as he was near death due to a disease about which "you don't want to hear". A wave of nausea swept over me immediately. I got weak and a little sick to my stomach.

It is interesting to notice the power of certain conversations. What is it about finding out that a friend and colleague has a disease so bad you don't even want to hear about it, but when you do, your body has an immediate reaction followed by depressing thoughts and sadness about health and life and death? These are the body reactions and concerns that many of us have about AIDS. It is natural to have fears about such a devastating disease and hope or wish that it would go away. Most of our concerns are grounded in the newness and the mystery of the disease. By now almost all of us have had at least a patient or two with "it". But we're not comfortable with it and certainly not at ease with the patients who have it. We are aware of our scientifically medical conversation that it is incurable and uniformly fatal. This is complicated by complex and overwhelming literature about the research of AIDS. We are not sure who these papers are aimed at but certainly not practicing physicians.

One domain that makes us uncomfortable is that in the absence of powerful technical medical treatment we must interact with these patients in a different manner. It is as if the clock has been set back and we can no longer hide behind our technology — like treating patients with phthisis before Koch and before effective therapy was available. Some of our discomfort is associated with wondering what to say to our patients — how to be physicians to these suffering frightened humans — to understand that these patients are indeed in the right office and don't need to be referred.

In order to care for our AIDS patients we have to learn more about it. We have to study it and talk about it and take care of our patients who have it. The National Institutes of Health presently funds 45 AIDS Clinical Trials Units nationally. The unit at Washington University in St. Louis is the only one located in this part of the Midwest and serves Missouri, southern Illinois, and northern Arkansas. Currently there are 13 active clinical protocols. These protocols involve Phase 1, 2, and 3 testing of new antiviral medications as well as trials of new therapies for Pneumocystis pneumonia and cryptococcal meningitis. All services provided by the unit are free to the patient including the medications. All patients are required to have a primary-care physician, felt to be essential as the number of AIDS patients increases.

The physicians of the AIDS Clinical Trials Unit have agreed to share their experience in treating these patients. I have accepted their offer to write a series of practical articles on HIV infection and AIDS for publication over the next year. It is my intention that these articles take some of the mystery out of our understanding of AIDS and help us to begin to address the basic concerns about the disease.

What do
income tax deductions,
financial security
and
medical
student loans
have in common?

The Invest in Missouri Program

Established in 1960, the Missouri State Medical Foundation (MSMF) provides low interest loans to Missouri students attending AMA-approved medical schools throughout the United States. The Foundation has provided more than 2,600 medical students with over $2.5 million in educational loans to date. Most of these funds have been provided through contributions of practicing medical professionals like yourself.

Now MSMF has created the **Invest in Missouri Program.** Your $5,000 or more investment not only provides funds for medical students but also gives you an *immediate* partial tax deduction **and** *extra* income at retirement.

The **Invest in Missouri Program** will help your future and that of colleagues in training. Please call or write today for more information.

The Invest in Missouri Program
Michael G. Grimes, MSMF Financial Advisor
Vice President, Prudential-Bache Securities
231 S. Bemiston Ave.
St. Louis, Missouri 63105
1/800-877-9200 • in St. Louis 721-9200

Complete the coupon and mail to: Michael G. Grimes, Vice President, Prudential-Bache Securities, 231 S. Bemiston, St. Louis, MO 63105

☐ Yes, I want to know more about the MSMF **Invest in Missouri** program. Please send me a no-obligation proposal. (*please print the information requested*)

Name ______________________________

Address ______________________________

City ____________ State ____________ Zip ____________

Date of birth ____________ Date of retirement ____________

Investment amount ____________

GUEST EDITORIAL

by Michael C. Perry, M.D., F.A.C.P.

None of us would like to practice as our predecessors did, with little in the way of modern drugs, imaging devices, and the like. It is the responsibility of each one of us to insure that those who follow will have a comparable harvest for the benefit of their patients.

Patients, Profits, and Progress

Even the most cynical observer would admit that medical progress results from the careful application of planned scientific studies. The controlled, randomized clinical trial stands at the pinnacle in the hierarchy of these studies because it is the final step before acceptance of a new treatment. In the area I know best, oncology, for instance, randomized trials have made adjuvant chemotherapy the community standard for Stage II breast cancer, and have proven that breast conservation surgery is equivalent to modified radical mastectomy in appropriately selected patients. Other examples abound and clearly there remain many significant clinical problems which demand answers. Why, then are clinical trials experiencing difficulty in enrolling patients and answering some of our pressing questions?

It cannot be because clinical trials offer poor care. The central premise is that well-conducted clinical trials are the best means of improving our current therapies because patients who participate receive either the best state-of-the art treatment, or a treatment experts believe to be equal or superior. Clinical trials, then, provide excellent care. Yet, accrual to ongoing trials is considerably below the pace required to answer important studies in a reasonable period of time. Why?

Several possibilities come to mind. The physician who sees the patient may not be aware of the existence of local or national trials. If aware, the physician may be so convinced of the superiority of his own approach that he/she may refuse to consider other alternatives as equal or superior. It may be easier to do things the old way. The physician may not want to risk the loss of the patient to another physician or medical center. Ego may be at stake. The patient may refuse to go elsewhere for another opinion, or if offered a randomized trial or an investigational drug/procedure may decline. Finally, there may be a question of reimbursement.

We have been relatively fortunate in Missouri as most third party payors still reimburse hospitals and physicians for clinical trials. Nationally, this is not so, and it may yet become a major problem in Missouri.

Is the situation hopeless? Are we so calcified that we cannot explore new possibilities? Let me try to provide answers to each of the above limiting factors.

First, the centers performing research need to do a better job informing other physicians and the public of the existence of and eligibility for their studies. Second, physicians need to re-examine their biases: has treatment "X" really been proven to be superior, or is it simply a habit one was taught long ago? Have we been influenced by a particularly forceful or eloquent speaker, or by objective study of hard, comparative data?

Third, how valid is the risk of losing the patient?

Is the patient reluctant to go elsewhere, or is profit getting in the way of our best advice and treatment? If these are considerations there are other options. In the field of oncology community physicians can become affiliated with research institutions via several mechanisms, gaining access to clinical trials and investigational drugs.

Finally, the patient will not be convinced unless the referring phy-

continued on page 426

AXID®

nizatidine

Enhances compliance and convenience

Patients appreciate Axid, 300 mg, in the Convenience Pak

In a Convenience Pak survey (N = 100)[1]

- 100% said the directions on the Convenience Pak were clear and easy to understand
- 93% reported not missing any doses

Pharmacists save time - at no extra cost

- The Convenience Pak saves dispensing time and minimizes handling

The Convenience Pak promotes patient counseling

- Pharmacists dispensing the Axid Convenience Pak can encourage compliance and continued customer satisfaction

Once nightly
Convenience Pak
AXID
nizatidine capsules
300 mg
Once nightly
Convenience Pak
AXID
nizatidine capsules
150 mg

Convenience Pak is available at no extra cost

Lilly

Eli Lilly and Company
Indianapolis, Indiana
46285

AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer In most patients, the ulcer will heal within four weeks

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h s. after healing of an active duodenal ulcer The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General* – 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2 Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3 Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects

Laboratory Tests – False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions – No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy – Teratogenic Effects – Pregnancy Category C – Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers – Studies conducted in lactating women have shown that <0 1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use – Safety and effectiveness in children have not been established

Use in Elderly Patients – Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0 2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1 3%) were significantly more common in the nizatidine group A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine

Hepatic – Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients All abnormalities were reversible after discontinuation of Axid.

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS – Rare cases of reversible mental confusion have been reported

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic – Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported

Integumental – Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients Rash and exfoliative dermatitis were also reported.

Hypersensitivity – As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely The following is provided to serve as a guide should such an overdose be encountered

Signs and Symptoms – There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment – To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

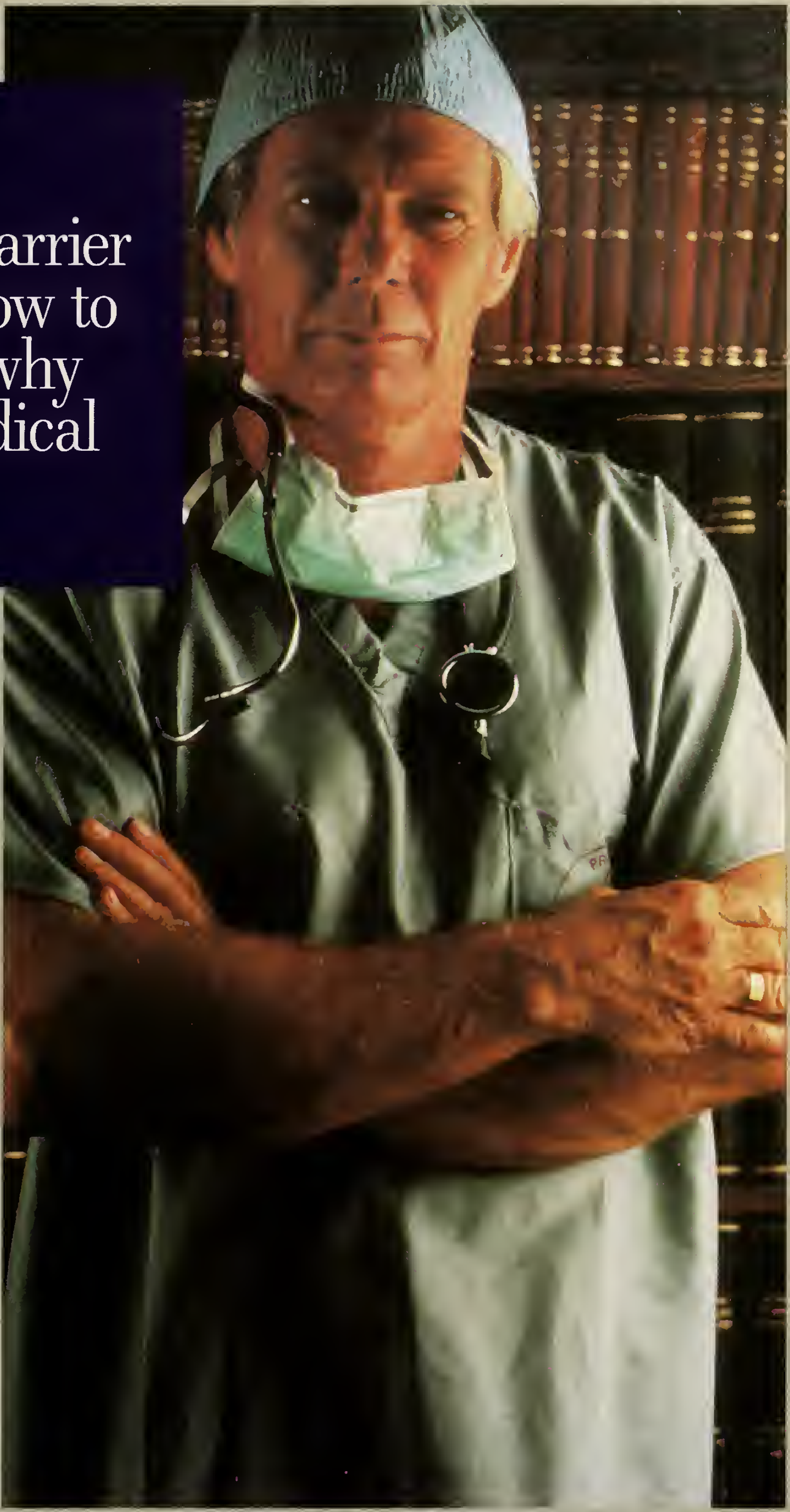
If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

[1] Data on file, Lilly Research Laboratories.

NZ-2907-B-949310 © 1989, ELI LILLY AND COMPANY



"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."

At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

131st Annual Convention

MISSOURI STATE MEDICAL ASSOCIATION

Marriott's Pavilion
St. Louis, Missouri
April 13-16, 1989

FIRST SESSION

The First Session of the MSMA House of Delegates was called to order at 10:00 a.m., Thursday, April 13, 1989 by Speaker of the House Arlen D. Winsky, M.D.. The following officers and delegates were present during the 131st Annual Meeting.

OFFICERS

President	T. J. Cooper, *St.Louis*
President-Elect	Marvin A. Singleton, *Joplin*
Vice-President	Kenneth R. Smith, Jr., *St. Louis*
Vice-President	William R. Richardson, *Union*
Vice-President	Herman J. Hausheer, *Independence*
Secretary	Norman P. Knowlton, III, *Springfield*
Treasurer	Harry O. Cole, *Chesterfield*
Speaker of the House	Arlen D. Winsky, *Springfield*
Vice-Speaker of the House	Jo-Ellyn M. Ryall, *St. Louis*

COUNCILORS

1st District	Gary A. Dyer, *St. Joseph*
2nd District	Robert V. Tompson, *Moberly*
3rd District	William H. Huffaker, *St. Louis*
3rd District	J. Otto Lottes, *St. Louis*
3rd District	Arturo Montes, *St. Louis*
3rd District	Frederick D. Peterson, *St. Louis*
3rd District	David Wilkinson, *St. Louis*
3rd District	Carol F. Williams, *St. Louis*
4th District	J. Michael Conoyer, *St. Charles*
5th District	Alan L. Braun, *Jefferson City*
5th District	Jerry Murrell, *Columbia*
6th District	A. J. Campbell, *Sedalia*
8th District	David W. Hall, *Rogersville*
8th District	Duane Hellam, *Springfield*
9th District	David O. Barbe, *Mountain Grove*
10th District	Melvin C. Kasten, *Sikeston*
Student	Evan K. Saunders, *St. Louis*
HMSS	Charles W. Barbee, *Columbia*

Lawrence A. Rues, M.D. of Kansas City addresses the MSMA House of Delegates.

VICE COUNCILORS

1st District	Stephen Vilmer, *Shawnee Mission, KS*
2nd District	Carl R. Kruse, *Palmyra*
3rd District	Meredith C. Payne, *St. Louis*
4th District	Sam L. Farrell, *Washington*
5th District	Ruth Kauffman, *Versailles*
6th District	Jerry Meyer, *Concordia*
8th District	Robert Brigden, *Joplin*
9th District	Thomas R. Stubbs, *West Plains*
10th District	William C. Shell, *Sikeston*
HMSS	William H. Dorzab, *Kansas City*
RPS	Charlene Prather, *Kansas City*

DELEGATES

First District

Buchanan	Edward H. Andres, *St. Joseph*
Buchanan	William Gondring, *St. Joseph*
Buchanan	B. A. Moranville, *St. Joseph*
Buchanan	Prakash Patel, *St. Joseph*
Buchanan	Robert Schaaf, *Gower*
Buchanan	York E. Silliman, *St. Joseph*
Clay-Platte	Donald A. Fakhoury, *Kansas City*
Clay-Platte	Thomas W. Kobberman, *Liberty*

Clay-Platte	Donald Kuenzi, *Kansas City*
Clay-Platte	Stephen A. McCray, *Gladstone*
Clay-Platte	Scott J. McKnight, *N. Kansas City*
Clay-Platte	Weldon Sportsman, *Kansas City*
Grand River	John R. Dixon, *Brookfield*
Grand River	Cal W. Greenlaw, *Chillicothe*
Northwest	Edward Bare, *Tarkio*

Second District

Chariton-Macon-Monroe-Randolph	Floyd Barnett, *Paris*
Chariton-Macon-Monroe-Randolph	James Campbell, *Macon*
Chariton-Macon-Monroe-Randolph	C. C. Cohrs, *Moberly*
Chariton-Macon-Monroe-Randolph	J. Will Fleming, *Moberly*
Northeast	Michael Bukstein, *Hannibal*
Northeast	Purification Florendo, *Hannibal*
Northeast	Edward Plowman, *Hannibal*
Pike	Lawrence G. Stuerman, *Louisiana*

Third District

St. Louis	David Abbott, *St. Louis*
St. Louis	Luis B. Anglo, *St. Louis*
St. Louis	John T. Anstey, *St. Louis*
St. Louis	Vernon H. Balster, *St. Louis*
St. Louis	Colita R. Banez, *St. Louis*
St. Louis	M. Roman Banton, *St. Louis*
St. Louis	Michael R. Banton, *St. Louis*
St. Louis	William C. Banton, II, *St. Louis*
St. Louis	Gerald Bart, *St. Louis*
St. Louis	Donald T. Behrens, *St. Louis*
St. Louis	Ralph L. Biddy, *St. Louis*
St. Louis	Olga Blair, *St. Louis*
St. Louis	George M. Bohigian, *St. Louis*
St. Louis	Arnold G. Brody, *St. Louis*
St. Louis	Kenneth Bruns, *St. Louis*
St. Louis	Robert Burstein, *St. Louis*
St. Louis	Fritz Byrum, *St. Louis*
St. Louis	Edmond B. Cabbabe, *St. Louis*
St. Louis	Carlo P. Caciolo, *St. Louis*
St. Louis	Arthur L. Casey, *St. Louis*
St. Louis	Frank J. Catanzaro, *St. Louis*
St. Louis	Octoavio R. Chirino, *St. Louis*
St. Louis	James G. Coates, *St. Louis*
St. Louis	Harry O. Cole, *St. Louis*
St. Louis	Mario A. Coronado, *St. Louis*
St. Louis	Jeffrey L. Craver, *St. Louis*
St. Louis	James Criscione, Jr., *St. Louis*
St. Louis	Richard K. Danis, *St. Louis*
St. Louis	Raymond P. Davidson, *St. Louis*
St. Louis	James W. Debnam, Jr., *St. Louis*
St. Louis	Jonathan D. Dehner, *St. Louis*
St. Louis	Robert B. Deitchman, *St. Louis*
St. Louis	V. Rao Devineni, *St. Louis*
St. Louis	David Dickler, *St. Louis*
St. Louis	Robert K. Dorton, *St. Louis*
St. Louis	James E. Edwards, *St. Louis*
St. Louis	Ronald G. Evens, *St. Louis*
St. Louis	Daniel Fabito, *St. Louis*
St. Louis	Linda Fisher, *St. Louis*
St. Louis	Mariano N. Floro, *St. Louis*
St. Louis	Paul L. Friedman, *St. Louis*
St. Louis	Joseph Gagliardo, *St. Louis*
St. Louis	Andrew E. Galakatos, *St. Louis*
St. Louis	Arthur H. Gale, *St. Louis*
St. Louis	R. R. Gavini, *St. Louis*
St. Louis	William B. Gedney, *St. Louis*
St. Louis	August Geise, *St. Louis*
St. Louis	Lance Garowin, *St. Louis*
St. Louis	Nellie N. Ghosh, *St. Louis*
St. Louis	Richard J. Gimpelson, *St. Louis*
St. Louis	John H. Gladney, *St. Louis*
St. Louis	Gordon M. Goldman, *St. Louis*
St. Louis	Alicia D. Gonzalez, *St. Louis*
St. Louis	E. Richard Graviss, *St. Louis*
St. Louis	Godofredo Herzog, *St. Louis*
St. Louis	Robert G. Hughes, *St. Louis*
St. Louis	Charles J. Johnson, *St. Louis*
St. Louis	Stephen A. Kamenetsky, *St. Louis*
St. Louis	Robert S. Karsh, *St. Louis*
St. Louis	Jack Kayes, *St. Louis*
St. Louis	Alice D. Kitchen, *St. Louis*
St. Louis	Harry L. Knopf, *St. Louis*
St. Louis	R. Raymond Knowles, *St. Louis*

Marvin Singleton, M.D., MSMA president for 1989-1990, acknowledges Ruth Pack's 22 years of service to MSMA while House Speaker Arlen Winsky leads the House of Delegates in applause.

St. Louis	Shelby Kopp, *St. Louis*
St. Louis	John E. Krettek, *St. Louis*
St. Louis	John M. Laird, *St. Louis*
St. Louis	Joseph J. Lauber, *St. Louis*
St. Louis	Jerome L. L'Ecuyer, *St. Louis*
St. Louis	William Leightner, *St. Louis*
St. Louis	Laurence A. Levine, *St. Louis*
St. Louis	Kun T. Liao, *St. Louis*
St. Louis	Francis X. Lieb, *St. Louis*
St. Louis	MacDonald Logie, *St. Louis*
St. Louis	Robert R. MacDonald, Jr., *St. Louis*
St. Louis	Otakar Machek, *St. Louis*
St. Louis	Antonio Manasala, *St. Louis*
St. Louis	Maria E. Manion, *St. Louis*
St. Louis	Daniel J. McGraw, *St. Louis*
St. Louis	Ravinder Mehra, *St. Louis*
St. Louis	Roger L. Mell, *St. Louis*
St. Louis	Jay Meyer, *St. Louis*
St. Louis	Melvin E. Meyer, *St. Louis*
St. Louis	Jerry M. Middleton, *St. Louis*
St. Louis	Robert N. Miller, *St. Louis*
St. Louis	Emil Miskovsky, *St. Louis*
St. Louis	Christopher Moran, *St. Louis*
St. Louis	Gerald W. Moritz, *St. Louis*
St. Louis	Nathaniel H. Murdock, *St. Louis*
St. Louis	Daniel J. Murphy, *St. Louis*
St. Louis	Daniel F. O'Sullivan, *St. Louis*
St. Louis	Leopoldo P. Pardo, *St. Louis*
St. Louis	Meredith J. Payne, *St. Louis*
St. Louis	David E. Perkins, *St. Louis*
St. Louis	Paul J. Petruska, *St. Louis*
St. Louis	David L. Pohl, *St. Louis*
St. Louis	Richard T. Quick, *St. Louis*
St. Louis	R. Moududur Rahman, *St. Louis*
St. Louis	Robert Rainey, *St. Louis*
St. Louis	Robert H. Ramsey, *St. Louis*
St. Louis	James C. Redington, *St. Louis*
St. Louis	David M. Reisler, *St. Louis*
St. Louis	Susan K. Reynolds, *St. Louis*
St. Louis	Frank O. Richards, *St. Louis*
St. Louis	Edward M. Ring, *St. Louis*
St. Louis	Hubert A. Ritter, *St. Louis*
St. Louis	John P. Roberts, *St. Louis*
St. Louis	Barry N. Rosenblum, *St. Louis*
St. Louis	Sudha Saha, *St. Louis*
St. Louis	Antonio Santillano, *St. Louis*
St. Louis	W. P. Schuessler, *St. Louis*
St. Louis	Melvin M. Schwartz, *St. Louis*
St. Louis	Sameer I. Shehadi, *St. Louis*
St. Louis	Raymond E. Shively, *St. Louis*
St. Louis	David L. Simon, *St. Louis*
St. Louis	Kenneth R. Smith, Jr., *St. Louis*
St. Louis	Franz U. Steinberg, *St. Louis*
St. Louis	J. Regan Thomas, *St. Louis*
St. Louis	Dolores R. Tucker, *St. Louis*
St. Louis	Timothy Turner, *St. Louis*
St. Louis	Peter G. Tuteur, *St. Louis*
St. Louis	Michael W. Vannier, *St. Louis*
St. Louis	Ernest T. Velasco, *St. Louis*
St. Louis	Leo L. Wacker, *St. Louis*
St. Louis	Harvey Walker, Jr., *St. Louis*
St. Louis	Bruce J. Walz, *St. Louis*
St. Louis	Joseph W. West, *St. Louis*
St. Louis	Stephan A. Wexler, *St. Louis*
St. Louis	Newton B. White, *St. Louis*
St. Louis	Miles C. Whitener, *St. Louis*
St. Louis	James M. Whittico, *St. Louis*
St. Louis	H. Robert Willis, *St. Louis*
St. Louis	Harry A. Wittler, *St. Louis*
St. Louis	J. Michael Zylka, *St. Louis*

Fourth District

Franklin-Gasconade-Warren	Sam Farrell, *Washington*
Franklin-Gasconade-Warren	George Workman, *Hermann*
St. Charles-Lincoln	Victor G. Clever, *St. Charles*
St. Charles-Lincoln	Jeffrey G. Copeland, *St. Charles*
St. Charles-Lincoln	Kathleen James, *St. Charles*
St. Charles-Lincoln	Martin L. Willman, *St. Charles*

Fifth District

Audrain	Nancy Bunge, *Mexico*
Audrain	Joseph Corrado, *Mexico*
Boone	Thomas R. Anderson, *Columbia*
Boone	Diane Brukardt, *Columbia*
Boone	Milamari Cunningham, *Columbia*
Boone	Jagadishwar Devkota, *Columbia*
Boone	William Griffin, *Columbia*
Boone	Richard Heimburger, *Columbia*
Boone	Arshad Husain, *Columbia*
Boone	Jerry Kennett, *Columbia*
Boone	Kirt Nichols, *Columbia*
Boone	Michael C. Perry, *Columbia*
Boone	Dorothy Rodgers, *Columbia*
Boone	James Roller, *Columbia*
Boone	Gilbert Ross, *Columbia*
Boone	Hugh E. Stephenson Jr., *Columbia*
Boone	Robert M. Thomas, *Columbia*
Callaway	Vernon B. Jackson, *Fulton*
Cole	Charles Cooper, *Jefferson City*
Cole	Victoria Gunn, *Jefferson City*
Cole	Lawrence D. Henry, *Jefferson City*
Cole	Rebecca Lueckenhoff, *Jefferson City*
Cole	Roy Michael, *Jefferson City*
Lake of the Ozarks	Chris Fotopoulos, *Osage Beach*

Lake of the Ozarks	M. R. (Pete) Hayden, *Camdenton*
Lake of the Ozarks	Robert Pelegrin, *Osage Beach*

Sixth District

Henry	Richard H. King, *Clinton*
Pettis	Phillip M. Hornbostel, *Sedalia*
Lafayette-Ray	Robert Pavlu, *Waverly*
Saline	Marvin E. Roehrs, *Marshall*
West Central	Grant Bever, *Lee's Summit*
West Central	William W. Haynie, *Butler*
West Central	Gerald Lee, *Kansas City*
West Central	Warren Lovinger, Jr., *Nevada*
West Central	William Turner, *Nevada*

Seventh District

Metro. Med./K.C.	Keith Ashcraft, *Kansas City*
Metro. Med./K.C.	Douglas B. Bogart, *Kansas City*
Metro. Med./K.C.	William D. Bradshaw, *Kansas City*
Metro. Med./K.C.	Barbara N. Buchanan, *Kansas City*
Metro. Med./K.C.	Steven E. Buie, *Kansas City*
Metro. Med./K.C.	William F. Case, *Kansas City*
Metro. Med./K.C.	Frederick G. DeFeo, *Kansas City*
Metro. Med./K.C.	William E. Dorzab, *Kansas City*
Metro. Med./K.C.	John Hardy, *Kansas City*
Metro. Med./K.C.	Herman Hausheer, *Independence*
Metro. Med./K.C.	George P. Hoech, Jr., *Kansas City*
Metro. Med./K.C.	Lloyd A. Hollinger, *Kansas City*
Metro. Med./K.C.	Pierre W. Keitges, *Kansas City*
Metro. Med./K.C.	Festus J. Krebs, III, *Kansas City*
Metro. Med./K.C.	Ted E. Lockwood, *Kansas City*
Metro. Med./K.C.	Jeffrey A. Matson, *Kansas City*
Metro. Med./K.C.	Richard B. Michelson, *Kansas City*
Metro. Med./K.C.	John D. Mitchell, *Kansas City*
Metro. Med./K.C.	George S. Postma, Jr., *Mission, KS*
Metro. Med./K.C.	Donald A. Potts, *Independence*
Metro. Med./K.C.	Larry A. Rues, *Kansas City*
Metro. Med./K.C.	Carl D. Siegel, *Kansas City*
Metro. Med./K.C.	Marjorie S. Sirridge, *Kansas City*
Metro. Med./K.C.	Lisa A. Susman, *Kansas City*
Metro. Med./K.C.	Marc K. Taormina, *Independence*
Metro. Med./K.C.	Michael L. Weaver, *Kansas City*
Metro. Med./K.C.	Jay H. Yedlin, *Kansas City*
Metro. Med./K.C.	Mark G. Zukaitis, *Kansas City*

Eighth District

Dallas-Hickory-Polk-Dade	James L. Molchan, *Bolivar*
Greene	Michael S. Clarke, *Springfield*
Greene	Stephen Curry, *Springfield*
Greene	James Duff, *Springfield*
Greene	Michael Gentry, *Springfield*
Greene	William Hardman, *Springfield*
Greene	H. B. Ivy, *Springfield*
Greene	Norman Knowlton III, *Springfield*
Greene	Keith LaFerriere, *Springfield*
Greene	Harold Lurie, *Springfield*
Greene	Marc McCorcle, *Springfield*
Greene	Don Menchetti, *Springfield*
Greene	Stanley Peterson, *Springfield*
Greene	Arteso Raborar, *Springfield*
Greene	James T. Rogers, *Springfield*
Greene	Larry Shields, *Springfield*
Greene	Jon Snow, *Springfield*
Greene	Diane Spoede, *Springfield*
Greene	Dan Sullivan, *Springfield*
Greene	Janie Vale, *Springfield*
Greene	Norman Wall, *Springfield*
Greene	James Wolfe, *Springfield*
Greene	Robert Zahn, *Springfield*
Jasper	Edward Grim, *Joplin*
Jasper	N. Mangalat, *Joplin*
Jasper	Clarence Martin, *Joplin*
Jasper	I. Joe Pryor, *Joplin*
Jasper	Duane Sherrod, *Joplin*
Jasper	Jack Vinyard, *Joplin*
Jasper	Robert Willcoxon, *Joplin*
Ozarks	Paul B. Anderson, *Neosho*
Ozarks	Richard Betz, *Neosho*
Ozarks	Robert Betz, *Neosho*
Webster	T. M. Macdonnell, *Marshfield*

Ninth District

Mid-Missouri	Barry Bass, *Rolla*
Mid-Missouri	James J. Bass, *Rolla*
Mid-Missouri	Richard H. Matthews, *Rolla*
South Central	James Hasek, *Mountain Grove*
South Central	C. F. Smith, *Willow Springs*
South Central	Thomas Stubbs, *West Plains*

Tenth District

Butler-Wayne-Ripley-Carter	Kirby Turner, *Poplar Bluff*
Cape Girardeau	Charles L. Crist, *Cape Girardeau*
Cape Girardeau	Gordon W. Eller, *Cape Girardeau*
Cape Girardeau	Theodore J. Glenn, *Cape Girardeau*
Cape Girardeau	Mark C. Kasten, *Cape Girardeau*
Cape Girardeau	Edwin J. Masters, *Cape Girardeau*
Cape Girardeau	Thomas C. Sparkman, *Cape Girardeau*
Cape Girardeau	Allen L. Spitler, *Cape Girardeau*
Dunklin	Nicholas F. Robinson, *Kennett*

Jefferson	Michael Blank, *DeSoto*
Jefferson	Alfred D. Shaplin, *St. Louis*
Mineral Area	J. David Auner, *Ironton*
Mineral Area	Charles Chastain, *Flat River*
Mineral Area	Robert Huckstep, *Farmington*
Perry-Ste.Genevieve	Job Pontillas, *Perryville*
SEMO	Gregory Bowers, *Sikeston*
SEMO	Stanley G. Jones, *Sikeston*
SEMO	William D. Miller, *Dexter*
SEMO	William Shell, *Sikeston*

Delegates-At-Large

Arlen D. Winsky, *Springfield*, Speaker
Jo-Ellyn M. Ryall, *St. Louis*, Vice Speaker

Past Presidents

Richard V. Bradley, *St. Louis*
H. Peter Ekern, *Mexico*
Walter A. German, *Springfield*
Walter T. Gunn, *St. Louis*
E. T. Hansbrough, *Poplar Bluff*
Howard J. McAlhany, *Springfield*
Andrew McCanse, *Kansas City*
James M. Stokes, *St. Louis*
E. A. Stricker, *Rolla*
Byron M. Stuart, *Boonville*

Medical School Deans

Lester Bryant, University of Missouri, *Columbia*
M. Kenton King, Washington University, *St. Louis*

Student Delegates

Ms. Dana S. Bacon, University of Missouri, *Kansas City*
Ms. Laura Carlson, University of Missouri, *Kansas City*
Ms. Lora A. Mills, University of Missouri, *Columbia*
Mr. Joseph V. Meyer, University of Missouri, *Columbia*

Hospital Medical Staff Section

James C. Redington, Jr., *St. Louis*

Resident Physician Section

Michael Burks, *Columbia*
Donald Cole, *Columbia*
C. Christopher Pittman, *St. Louis*
Lisa Zacharwicz, *Kansas City*

MSMA President T.J. Cooper, M.D., gave the invocation. Meredith Payne, Chairman of the Committee on Credentials, reported that eight officers, 21 councilors, and 124 delegates were present. The minutes from the 130th Annual Convention were approved as published in the July 1988 issue of ***Missouri Medicine.***

Speaker Winsky announced the members of the various reference committees: Reference Committee on Constitution and Bylaws (Reference Committee A) – James Wolfe, Chairman, Michael Vannier, William Gondring, Job Pontillas, and Kathleen James; Reference Committee on Report of Officers (Reference Committee B) – Edmond Cabbabe, Chairman, James Bass, William Gadney, William Dorzab, and Dana Bacon; Reference Committee on Resolutions (Reference Committee C) – Pierre Keitges, Chairman, Jerry Kennett, Gerald Moritz, Herman Hausheer, and Marvin Roehrs. Stanley Peterson served as Parliamentarian. The Credentials Committee consisted of Meredith Payne, Chairman, George Workman, and William Bradshaw. The following physicians served as tellers: Gordon Goldman, Chief Teller, Thomas Kobberman, Thomas Sparkman, Douglas Bogart, and Nancy Bunge.

Dr. T. J. Cooper then addressed the entire House and his remarks appear on page 393 of this issue. Vice Speaker Jo-Ellyn Ryall introduced MSMA Auxiliary President Eileen Dyer, who addressed the House. Her remarks appear on page 395 of this issue.

Following her remarks, Mrs. Dyer asked Dr. Cooper to assist her in distributing the AMA-ERF checks to Missouri's four medical schools. Marjorie Sirridge, M.D., accepted the checks for the University of Missouri - Kansas City School of Medicine. UMKC received $1918.40 in designated contributions and $7294.64 in undesignated contributions. Representing the Missouri University School of Medicine at Columbia, Hugh Stephenson, M.D., accepted $3482.61 in designated contributions and $6585.36 in undesignated contributions. Manuel Comas, M.D., of the St. Louis University School of Medicine accepted $7,701.00 in designated contributions and $16,624.39 in undesignated contributions. On behalf of Washington University School of Medicine, Kenton King, M.D., accepted $4833.10 in designated contributions and $7278.08 in undesignated contributions.

Next, Dr. Cooper asked Warren C. Lovinger, M.D.to come to the podium to receive the 1989 Citizenship and Community Service Award. An internist practicing in Nevada, Dr. Lovinger is a 1977 graduate of the John Hopkins School of Medicine. He completed his

MISSOURI
STATE
MEDICAL
ASSOCIATION

Warren Lovinger, M.D., of Nevada accepts the 1989 Citizenship and Community Service Award from T.J. Cooper, M.D., 1988-1989 MSMA president.

medicine residency in 1980 at Barnes Hospital/Washington University. Dr. Lovinger has been a delegate to the MSMA House since 1986 and a member of the Association since 1977. He currently serves on the Public Affairs Commission and the Young Physicians Committee. At the local level he has served the West Central Medical Society as vice president and president. Dr. Lovinger is also affiliated with the Christian Medical Society, for which he co-founded the Joplin Regional Chapter in 1985. He is a member of the American and Missouri Societies of Internal Medicine, the American College of Physicians, and the American Medical Association.

In his home community of Nevada, Dr. Lovinger is active in the local industrial and economic development commissions. He headed the Vernon County United Way fund drive from 1984 to 1986, and under his leadership the fund exceeded the higher-dollar goal each year. As a member of the First Presbyterian Church in Nevada, he headed up its building committee. He is a member of the local Rotary Club and received its Citizen of the Year Award in 1987. That same year he received the Nevada Chamber of Commerce Pacesetter Award as its outstanding member in 1987. In 1988 he was honored as Vernon County Citizen of the Year. Dr. Lovinger earned these honors in large part through his leadership during the 1987 Hepatitis A outbreak in Nevada. Dr. Cooper then presented Dr. Lovinger with a plaque, and Dr. Lovinger addressed the MSMA House.

Following Dr. Lovinger's remarks, Dr. Cooper introduced John Ring, M.D., who is Chairman of the AMA Board of Trustees. Dr. Ring is a family physician from Mundelein, IL. He was first elected to the AMA Board in 1985. Dr. Ring is an active member of the Illinois State Medical Society, serving as a delegate to the Illinois House and as a trustee.

Vice Speaker Ryall announced that the Reports of Officers, Committees and Commissions were referred as shown in the Delegates Handbook. She asked for supplemental reports and found that a supplemental report of the Committee on Constitution and Bylaws was distributed to the House of Delegates during this First Session. Vice speaker Ryall then asked Dr. Frederick Peterson to present the Report of the Missouri Patient Care Review Foundation. Following Dr. Peterson, Marvin Singleton, M.D., presented the MMPAC report to the MSMA House. Next Richard Bradley, M.D., the president of MOMEDICO, reported on the professional liability insurance company. Speaker Winsky then announced that the Supplemental Report of the Council for their meeting held April 12 had been distributed to the House and would be referred to the Reference Committee on the Reports of Officers.

Dr. Cooper then announced his appointments for the 1989 Committee on Nominations whose members are chosen from each Councilor District:

First District, Stephen Vilmer, *Shawnee Mission*
Second District, J. Will Fleming, *Moberly*
Third District, Daniel O'Sullivan, *St. Louis*
Fourth District, Sam Farrell, *Washington*
Fifth District, Diane Brukardt, *Columbia*
Sixth District, Jerry Meyer, *Concordia*
Seventh District, William Case, *Kansas City*
Eighth District, Stanley Peterson, *Springfield*
Ninth District, Thomas Stubbs, *West Plains*
Tenth District, Tom Sparkman, *Cape Girardeau*
Student Councilor, Nasreen Syed, *UMKC*
Hospital Medical Staff Section, William Dorzab, *Kansas City*

At the request of the Speaker, the House stood and observed a moment of silence for those MSMA members who had died since the 1988 Annual Meeting. The Courtesy Resolution honoring them appears on page 405 of this issue.

Four late resolutions, each requiring a two-thirds majority to become official business, were introduced to the House under New Business. The first late resolution was introduced by Alan Braun, John Lyskowski, and Lawrence Rettenmaier on Neutrality on Abortion-Related Issues. It was approved for House business, numbered 35 and referred to the Reference Committee on Constitution & Bylaws. The next two proposed resolutions were introduced by the MSMA Council.

Incoming MSMA President Marvin Singleton, M.D., presents a plaque of appreciation to T.J. Cooper, M.D., now the immediate past-president of the association.

One addressed Mandated Benefits in Health Care Insurance Coverage and the other Regulation of Ordering Laboratory and Diagnostic Tests. Both were approved for House action. They were numbered 36 and 37, respectively, and both were referred to the Reference Committee on Resolutions. The final late resolution was introduced by Jon Snow, Greene County Medical Society on Medicare Programs: Reasonableness of Service. Approved for business and numbered 38, it too was referred to the Reference Committee on Resolutions.

Then Nancy Bunge, M.D., presented a report on the Young Physicians Committee and announced they would meet on Saturday.

After Dr. O'Sullivan requested a meeting of the Nominating Committee at 4:00 p.m. in the House, the First Session of the House of Delegates was adjourned.

SECOND SESSION

The Second Session of the 131st Annual House of Delegates of the Missouri State Medical Association was called to order by Speaker Winsky at 4:00 p.m. on Friday, April 14.

Dr. Meredith Payne gave the Credentials Committee report, stating that nine officers, 21 councilors and 279 delegates were present and constituted a quorum.

Dr. T. J. Cooper stated that the Missouri Legislature has much more to say over the day-to-day practice of medicine and treatment of patients. Five members of the Missouri General Assembly were honored before the House with special plaques of appreciation for their service on behalf of medicine. Honored were Rep. Jack Goldman (Affton), Sen. John Bass (St. Louis) Rep. Russell Goward (St. Louis), Dr. Al Nilges (Bourbon) and Rep. Sue Shear (Clayton).

Following these presentations, Robert G. Harmon, M.D., director of the Missouri Department of Health, addressed the House. Next Vice Speaker Ryall invited Dr. O'Sullivan to the podium. He presented the report of the Nominating Committee that proposed the following slate of officers for 1989-90:

President-Elect:	Dr. Gary A. Dyer, *St. Joseph*
Vice presidents:	Dr. Clarence A. Martin, *Joplin* Dr. Jack Case, *St. Louis* Dr. Barbara Buchanan, *Kansas City*
Speaker of the House:	Dr. Jo-Ellyn Ryall, *St. Louis*
Vice Speaker of the House:	Dr. James P. Wolfe, *Springfield*
AMA delegates:	Dr. Melvin C. Kasten, *Cape Girardeau* Dr. Vernon Balster, *St. Louis* Dr. Keith Ashcraft, *Kansas City* Dr. Robert R. MacDonald, Jr., *St. Louis*
AMA alternate delegates:	Dr. David Hall, *Springfield* Dr. H. Peter Ekern, *Mexico* Nasreen Syed, *student, UMKC* Dr. Jo-Ellyn M. Ryall, *St. Louis* Dr. Robert T. Gibbons, Jr., *Overland Park, KS*
AMA Young Physicians Section delegates:	Dr. Nancy Bunge, *Mexico* Dr. Evan Crandell, *St. Louis.*

Reference Committee on Constitution and Bylaws

Dr. James Wolfe presented the report of the Reference Committee on Constitution and Bylaws Committee. The House approved a motion limiting debate to two minutes per speaker on all pending reference committee report matters. **Please note that House actions on all resolutions appear in the section "Resolutions" on pages 399-404.** The following items were placed on the consent calendar:

Report of the Committee on Constitution and Bylaws.
Supplemental Report of the Committee on Constitution & Bylaws.
Resolution 12 Hospital Medical Staff Privileges
Resolution 24 MSMA Committee on Biomedical Ethics

The Committee then made recommendations on the following resolutions:

Resolution 21 Federal Cigarette Excise Tax and Health Expense
Resolution 5 Malpractice Reform
Resolution 18 Continued Tort Reform in Missouri
Resolution 34 Referendum on Malpractice
Resolution 7 Malpractice Testimony
Resolution 14 Missouri Declaration on Life Support
Resolution 16 Licensing of Psychologists
Resolution 25 Nationwide Negotiating Rights for Physicians
Resolution 30 Continuing Medical Education for Missouri Licensure
Resolution 33 Study of No Cost Drugs to Addicts
Resolution 35 Neutrality on Abortion-Related Issues

Reference Committee on Reports of Officers

Dr. Edmond Cabbabe, chairman of the Reference Committee on Reports of Officers announced that his committee had placed the following items on the consent calendar.

No. 1. Report of the President
No. 2. Report of the MSMA Auxiliary
No. 3. Report of the Committee on Legislative Affairs
No. 4. Report of the Secretary
No. 5. Report of the Treasurer — MSMA financial statement
No. 6. Report of the Executive Vice-President
No. 7. Council Minutes
No. 8. Report of the MSMF, Financial Statement
No. 9. Report of the Commission on Interspecialty Medicine
No. 10. Report of the Commission on Public Affairs
No. 11. Report of the Committee on Publications
No. 12. Report of the Ad Hoc Committee on Sunsetting
No. 13. Report of the Committee on Planning
No. 14. Report of the Judicial Council

The consent calendar was adopted by the House.
House actions on the following resolutions are reported in the section "Resolutions" on pages 399-404.

Resolution 1. Physician Grievance Board
Resolution 3. Quindaro Landfill and Pollution of the Missouri River
Resolution 4. Clean Air
Resolution 6. The Relationship Between Proposed MSMA Resolutions & Existing AMA Policy
Resolution 8. False and Deceptive Advertising
Resolution 11. Resident Physician Membership
Resolution 17. MSMA 5-year Dues Payment Plan
Resolution 19. St. Louis Regional Health Care District
Resolution 27. MSMA Spouse Dues Plan
Resolution 29. Elimination of Tuberculosis as a Public Health Problem
Resolution 32. Health Care Costs

Reference Committee on Resolutions

Dr. Pierre Keitges, chairman of the Reference Committee on Resolutions, stated the following items had been placed on the consent calendar:

1. Report of the Commission on Continuing Education and Health Manpower.
2. Report of the Physician Rehabilitation Committee with the following editorial comment: On page 405 of the Committee's report the word "members" in the first sentence of the fourth paragraph should read "nonmembers."
3. Report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations.
4. Report of the Commission on Medical-Legal Affairs.

The House adopted the consent calendar.

House actions on the following resolutions are reported in the section "Resolutions" on pages 399-404.

Resolution 2. Equal Reimbursement Under Medicare — Legal Action
Resolution 31. Equal Reimbursement for Rural and Urban Hospitals
Resolution 9. Physicians Charity Care Program
Resolution 10. Mandatory Testing for AIDS
Resolution 13. Medicaid Parity
Resolution 15. Equity in Medicare Reimbursement Fee Schedule
Resolution 20. Mammography Re-Visit
Resolution 36. Mandated Benefits in Health Care Insurance Coverage
Resolution 22. Training for Use of New Vital Records Form

Resolution 23	Accountability of Third-Party Payer Review Activities
Resolution 26	Unregulated Insurers
Resolution 28	HMO Warning Labels
Resolution 37	Regulation of Ordering Laboratory Studies and Diagnostic Tests
Resolution 38	Medicare Programs: Reasonableness of Services; Medical Necessity of Services; Appropriateness of Inpatient Setting; Substandard Medicare

Following this report, the Speaker asked for old and new business. Seeing none, he adjourned the Second Session of the House of Delegates.

THIRD SESSION

The Third Session of the 131st House of Delegates of the MSMA was called to order by Speaker Winsky at 7:30 a.m. on Sunday, April 16. The Report of the Committee on Credentials was presented by Dr.Payne who announced that nine officers, 21 councilors and 297 delegates were present. This represented a quorum and the report was adopted.

The first item on the agenda was the election of officers. These individuals were presented by the Nominating Committee at the Second Session (see page 384 for complete list) and the nominations were closed during that Session. The slate of officers for 1989-1990 was unanimously elected by the House. Dr. Dyer, the new president-elect, briefly addressed the House.

Gary Dyer, M.D., of St. Joseph, and his wife Eileen who served as the 1988-1989 president of the MSMA Auxiliary, greet the House of Delegates along with Speaker Arlen Winsky. Dyer is MSMA president-elect.

Following Dr. Dyer's remarks, Dr. Winsky asked Dr. Norman Knowlton, MSMA Secretary, to give the Report of the Election of Councilors and Vice-Councilors. These elections were held in the respective district caucuses:

First District
Stephen Vilmer, *Councilor*
Robert Schaaf, *Vice Councilor*
Second District
Robert Thompson, *Councilor*
Carl Kruse, *Vice Councilor*
Third District
William Huffaker, *Councilor*
Arturo Montez, *Councilor*
Carol Williams, *Councilor*
David Wilkinson, *Councilor*
Fourth District
J. Michael Conoyer, *Councilor*
Sam L. Farrell, *Vice Councilor*
Sixth District
A. J. Campbell, *Councilor*
Jerry Meyer, *Vice Councilor*
Seventh District
Dorothy Reister, *Councilor*
Frederick W. Hahn, *Councilor*
Robert Gibbons, Jr., *Councilor*
Jay Yedlin, *Vice Councilor*
Eighth District
David Hall, *Councilor*
Robert Brigden, *Vice Councilor*
Tenth District
Melvin Kasten, *Councilor*
William Shell, *Vice Councilor*
Resident Physicians Section
Charlene Prather, *Councilor*
Carla Siegfried, *Vice Councilor*
Medical Student Section
Laura Carlson, UMKC, *Councilor*
Laura Mills, UMC, *Vice Councilor*

Vice Speaker Ryall called on Dr. Pierre Keitges of the Resolution Committee to present his supplemental report as unfinished business of the House. Two resolutions were referred back to the committee: Resolution 2 – Equal Reimbursement Under Medicare - Legal Action and Resolution 37 – Regulation of Ordering Laboratory Studies and Diagnostic Tests. **House action on theses resolutions is reported in the section "Resolutions" on pages 399-404.**

Next, Vice Speaker Ryall asked for new business. Dr. Norman Knowlton, MSMA secretary, conducted the installation of officers.

Trinity Lutheran Hospital
Glaxo Pharmaceuticals

MSMA members spent their breaks and spare time viewing the variety of exhibits during the St. Louis convention.

Afterward, Dr. Marvin Singleton announced his appointments of chairmen for the MSMA committees and commissions (please note that a complete listing of all MSMA standing committees and commissions will appear in the August Directory issue of **Missouri Medicine**).

The Committee on Constitution & Bylaws
Edward R. Grafis, *St. Louis*

Committee on Legislative Affairs
John I. Matthews, *Jefferson City*

Physicians Health Committee
Carl Pearman, *Springfield*

Committee on Planning
Philip Hornbostel, *Sedalia*

Committee on Continuing Medical Economics, Third Party Medicine and Governmental Relations
Milamari A. Cunningham, *Columbia*

Commission on Medical-Legal Affairs
Ed Cabbabe, *St. Louis*

Commission on Public Affairs
Keith A. Lefever, *Springfield*

Publications Committee
Donald G. Sessions, *St. Louis*

The Judicial Council
Eugene T. Hansbrough, *Poplar Bluff*
Walter A. German, *Springfield*, five-year term

Speaker Winsky announced that the 132nd Annual Convention will be April 5-8, 1990 at Tan-Tar-A, Lake of the Ozarks. The 133rd Annual Convention will be April 3-7, 1991 at Crown Center in Kansas City. Invitations were received for the 1992 convention to be in St. Louis, the 1993 convention to be at the Lake of the Ozarks and the 1994 convention to be in Kansas City.

The Speaker then adjourned the 131st Annual Convention of the MSMA House of Delegates on April 15, 1989.

Editor's Note: *Complete minutes for the 131st Annual Meeting are on file at the MSMA office, 113 Madison, Jefferson City, MO. Any MSMA member interested in reviewing the complete report may do so at the Association office.*

U.S. Congressman Jack Buechner of St. Louis addressed a large audience at the annual Public Affairs Breakfast during the 131st Convention.

PIE's quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. PIE Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

QRP FACTS:

Strict Underwriting Criteria – Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

Scheduled Premium Reductions – Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

High Limits – Backed by our reinsurer, Lloyd's of London, PIE is able to offer higher coverage limits for qualifying doctors: up to $5 million for individual doctors and $7.5 million for group policies. Lloyd's of London is the largest reinsurer in the world.

Designed With Input from Doctors – PIE's QRP plan is an innovative modified claims-made insurance specially designed with input from PIE-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your PIE representative, or our headquarters office today.

The PIE Mutual
Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth Street
Cleveland, OH 44114
(216) 781-1087

Mutual
Insurance
Company
PIE

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT
CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410

ROLLINS BURDICK HUNTER
OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

Presidential Inauguration Speech

Marvin A. Singleton, M.D.

Dr. Cooper, Delegates, Honored Guests, and Colleagues: It's with a great deal of pleasure that I stand before you as the incoming President of the Missouri State Medical Association.

Many thoughts flood into my mind. My parents, Dr. Henry Marvin and Mary Ruth Singleton, gave me the "stickability" to persevere in the field of medicine and life. My older brother, Dr. E. Mitchell Singleton and my sister, Mollie Singleton, have encouraged me. My wife, Anita, and children, Mitchell and Catherine, have given me a great deal of pleasure, support and allowed me to pursue MSMA activities. My employees, Jean Ray, Joyce Hoskins, Kay Sappington, and the physicians and auxiliary of Jasper County have been supportive as have my colleagues in Southwest Missouri, to mention Stan Peterson, Howard McElhany, Walter German and Ken Glover.

In reviewing the past, I am pleased to see some achievements as a result of hard work. One instituted by me in 1979 and 1980, enabled physicians to participate in the State of Missouri Deferred Compensation Plan. I have seen a captive liability insurance company come to life and have served on the Board of Directors of MOMEDICO. In 1983 I also initiated discussion on a Medical Business Coalition in Joplin, which later was formed with business, modeled after the Medicine Business Coalition in Springfield. Serving as chairman of your Missouri Political Action Committee, together with the treasurer, Mr. Royal Cooper and others, the additional participation category of SuperPAC was implemented. Issues of concern where we should take a stance include caring for needy elderly, tort reform, liability crisis, intrusion of government and third party payers in actual practice of medicine, multiple para-professional individuals that are attempting to broaden the scope of their reimbursement and practices, the issues of corporate medicine, ethical and technological questions that plague our profession by the government and to some extent the public. Reforms in uncompensated care, underinsured and uninsurables must be addressed quickly. I am calling upon MSMA to form a position composed by experts in the field, then call upon Missouri's citizens, the Legislature and the Governor to enact broad reaching reforms within the Medicaid delivery system. This year I have called upon our elected officials to implement a five-year phase-in program to set physicians Medicaid reimbursements at 75% of the usual and customary fees for all procedures, to establish a Missouri Medical Market Basket Index of Costs, looking to the future so we can keep up with cost increases and not fall into the present situation of actual year to year decreases.

Marvin A. Singleton, M.D.

I have called for reimbursement and fee schedules which would be devised to reflect the cost and commitment of physicians who serve a disproportionately larger number of Medicaid patients. Also establishing physician immunity from liability when treating Medicaid patients, except in cases of gross negligence; simplifying processing physician claims to expedite handling of payments of claims; expanding coverage of pregnant women and newborns; expanding Medicaid to automatically cover certain individuals to provide health care accessibility. We must be proactive in the legislative process, the executive branch, and through a public awareness program across the state.

Therefore, rather than dwell on our past accomplishments, we should look to the future for our opportunities as physicians in guiding health care delivery systems. In contrast to Dr. Peter Gott, a columnist who believes that doctors "may need a change of image", I think doctors need a return to the "old image". An image of trust between physician and patient, much like Norman Rockwell's Saturday Evening Post covers.

Today's doctor image and what has been can be partly blamed on physicians themselves. Echoing Dr. James Davis, AMA president, I call upon you to give a "tithe of your time" and spend four hours a week serving the public. Last year, I spent hours in the hospital basement donating my time to that monolithic conglomerate called a hospital chain and received no credit from the public. Nor do I think my time performing mandated services for the hospital was appreciated.

It's time physicians either get paid for their time performing mandated services within hospitals or allow other individuals to perform those services so that we may become more visible performing community service. For instance, why should the physician be buried in chart work that could be left to others while the administrator of the hospital is at the Rotary Club or The United Way? Community service can be leading a church youth group, working with the scouts, school library, visiting shut-ins, or running for public office. The bottom line is our community visibility so the public understands that we are a caring profession who care about each other and about them as individuals and as patients.

Dr. James Webster in an *American Journal of Medicine* editorial listed four generally-accepted reasons why doctors are not perceived as being advocates of the public nor concerned with the best interest of patients. First, he said physician's incomes have risen dramatically and disproportionately. I believe that this is not a valid reason since those of other professions have risen as dramatically. The public is less incensed with the doctor who earns a comfortable living than with the doctor who flaunts his wealth. Secondly, Webster goes on to state that physicians are held accountable for the great rise in health care costs even though physician fees comprise a small portion of these costs. In the past doctors have traditionally decided how to spend health care dollars through testing or treatment with few restraints. Physicians should cooperate with patients to reduce medical spending. When chains such as Wal-Mart can reprice their inventory overnight, it simply makes sense that hospitals price their services so that everyone knows exact costs. If we as the medical profession refuse to do anything in regards to costs in helping the patient choose hospital services, the responsibility will be taken from us.

Thirdly, Dr. Webster notes a dramatic change in the doctor-patient relationship with most care now provided by specialists. The implication is that this type of health care is less desirable. However, the pluralistic approach to health care is with us and whether given by a specialist or a family practitioner, the quality of care, the physician's expectations, attitudes, and the perception of service by the patient is at stake. We need to return to a physician and patient relationship instead of being a provider, vender or purchaser of health care. Webster's fourth observance is that physicians are perceived as "being in business"; hence income becomes more important than healing. Since doctors earn money to subsist, medicine has always been a business; however, with the intrusion of third party payers such as insurance, Medicare and Medicaid, this has forced doctors to modify their fee collections to adapt to changing methods of reimbursement. Nevertheless, profit and loss retailing mentality is not in the best interest of good medical care. We must remind ourselves constantly that our role is to heal and not to gouge.

In order to change the perceptions noted by Dr. Webster we must again return to the medical professional and act as advocates for the patients; for if we do not, who will? We cannot change third party payers and reimbursement methods, alternative care and delivery systems, professional liabilities, substance abuse, AIDS, and rationing of health care. These are societal issues. We should advocate public discussion of such since physicians alone cannot change them, nor should they be responsible for solutions to the above problems. Society must first discuss what will be accepted for payment and funding. The legislatures must then appropriate the needed resources so that physicians and the public obtain a clear understanding of what society is willing to accept and support with careful guidelines. Physicians should resist being the rationer of health care as designated by a society that is unwilling to relinquish that control, such as allowing courts to decide ethical questions regarding appropriate means of medical treatment. Only then can physicians return to the idea of service where our mission in life truly is to serve the public, and the public then will support us in future issues that arise.

How do we provide health care for those who cannot afford it? We too often think the villain in health care costs is the poor individual on public assistance. Although Medicaid costs are in the billions, they only represent approximately 15% of all health care costs. The greatest expenditure (2/3 of the total) is the middle income people covered by private or governmental health insurance programs. Hospitals must be held accountable and provide a cheap level of care for responsible, employed individuals who want a reasonable room but decent care. Long term care and the nursing home industry is consuming an ever-increasing portion of health care resources; in the future this will be the largest single area with fewer and fewer sources of revenue for that care.

Dr. John Kitzhaber, a family practitioner who is also President of the Oregon State Senate, deals with uncompensated care, including relative costs and benefits, by assessing the needs of Oregon's citizens and what society will cover financially. His solution enables cheaper hospital rooms because not all (and often unnecessary) services are offered and Medicaid isn't expanded unless the legislature appropriates the money for the program.

Members of the Missouri Legislature and the Governor's office are reviewing uncompensated care and underinsured individuals plus decreasing hospitalization costs as well as new hospital construction that may be unneeded and unnecessary. Frequently hospital construction is due to an aggressive Board of Directors, often composed of the community's industrial leaders who have the corporation's (the hospital's) best interest at heart. In the business world one must constantly expand, create more services, more production capacity, more sales through advertising; this approach has entered the health care field. Suddenly the local non-profit hospital that provided nursing and other services becomes the center of the industrial community and a tremendous profit is actively and eagerly sought.

By organizing into strong federations such as the Missouri State Medical Association and individualized incorporation of the medical/dental staffs within each hospital, we can come to grips with our profession's future. Consider the preacher of the Swarnes Prairie Baptist Church who called on a farmer who hadn't been attending church. Brother

John visited with the farmer to see if he had any concerns. While the preacher sat by the fireplace he removed a small ember that was burning largely, brightly, and hotly, placed the ember at the side of the hearth, and continued conversing with the farmer. The farmer said, "Brother John, I haven't had time to come to church. We've had some pressing things here on the farm. Didn't really feel like you would miss me. You always do a pretty good job without me." After Brother John visited a little longer, he got up to leave and turned to look at the ember. "When I arrived that ember was bright and red and full of life. But, once it was set out by itself, it slowly died and is no longer hot. In order to be productive that ember must be returned to the fireplace with the other embers in order to have an influence and be able to heat this house."

And you know, Brother John is right. You as individuals, spouses, and families really do not have a voice unless you participate in organized medicine in some form.

With this background and the need to return to being a "true friend" with a bond between the physician and the patient, I am calling upon MSMA to establish a support system or Ombudsman Program to:

1) Enable physicians to provide health care information to the public and referrals to physicians, staffed by semi or retired physicians.

2) Develop through component societies, an active *industrial visitation program* where by physicians can go out into industry, into the work place of our patients, actually observe industry and the work place of our patients to determine their health care needs and that of employees and to assist them in a wellness program.

3) I call upon the Councilors to fulfill the MSMA constitution that states "each Councilor shall be an organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and to keep in touch with the activities of and aid in the betterment of the component societies of his district.

I am calling upon MSMA to develop a proactive legislative program to include specific recommendations on tort reform, uncompensated care, and Medicaid overhaul. I'm also asking that community leaders become involved in decisions regarding health care facilities being built and the need for these.

Lastly, I am calling upon the MSMA membership to give a "tithe of time".

Finally, I believe it's not a change of image that we need. We need to return to the image of Norman Rockwell's physician and patient. I think as those four physicians who signed the Declaration of Independence, we should admit today that physicians have always held service as our highest goal. In order for the public to again realize that, physicians must be visible through community service and true activity on behalf of our patients. Public service is a mantle on which our profession has been founded and should be continued for the benefit of our patients and our profession.

As it is said in Deuteronomy Chapter 14 verse 27, "Don't forget to share your income with the Levites in your community for they have no property or crops as you do. Every third year, you are to use your entire tithe for local welfare programs. Give it to the Levites who have no inheritance among you or to foreigners or to widows and orphans within your city so that they can eat, be satisfied and then Jehovah your God will bless you and your work."

For I will close urging you to become the apostles of your patients, return to the ways of the physicians who for 200 years have been a servant of mankind who can still function for the people as their most important advocate.

GOAL
TENDING.

Financial goals set by professionals, protected by professionals.

Professionals set objectives. They work hard to achieve goals. And they strive for financial security for themselves and their families.

Naturally, professionals are best suited to meet their personal career objectives. Managing their personal finances, on the other hand, often requires outside help. They don't have the training—or the time—to manage their assets most effectively.

As a professional, you can benefit from financial goal tending to meet your short- and long-term objectives. You need the expertise, experience and objectivity that only a professional financial counselor can provide. You need information.

United Missouri Bank is *The Information Bank.* Any questions?

UNITED MISSOURI BANK
Member FDIC
P.O. Box 419226 Kansas City, Missouri 64141-6226 Craig Huntley 816 556-7738

President's Message

Thomas J. Cooper, M.D.

It's good to see so many of you here. Welcome to St. Louis. You will get to share with us some of the baseball fever as we begin our successful quest for the title this year. We wish the people on the west side of the state equal success so that a little matter that occurred a couple of years ago can be rectified.

There are many things to be seen and done here in St. Louis and we hope that we can move through our agenda and make time available for you and your families to take advantage of the weather and of the things that are available.

As I look back on the past year in office, there are many good memories and some that are not so good. The good, I will save for Saturday night. The not so good, I will address now.

My main hope was to bring the poor of our state into the mainstream of medicine. MedAssist was a noble experiment to allow those with resources to voluntarily share with their less fortunate brethren. However, when the question as to whether we would choose to be our brother's keeper was finally put to a vote, the response was a resounding no.

So the poor, and those out of work or with no insurance are still with us —no better off than before.

I also wanted to have a plan of voluntary acceptance of Medicare assignment as payment for those individuals whose income was 150 percent or less of the poverty level. This was not acceptable to the organizations made up of the elderly, as they perceived it as a means test and therefore demeaning.

Thomas J. Cooper, M.D.

Since these same individuals are pushing for mandatory assignment for all Medicare patients, I find their reasoning specious. The elderly poor are still dependent on the graciousness of their physicians for their care. Physicians must do a better job of calling the attention of the public to the unfortunates who are under-served, for whatever reason, be it the under-funding of Medicaid or be it through the thought on the part of our legislators that the health care of the poor is to be placed on the back of those who deliver health care.

Should the same analogy apply to those who rent housing or raise and sell food? Since they are providers of housing, they should house the poor at no charge to society. Since they raise food, they should provide food at no cost to society.

This list is endless.

Another problem to be addressed is the continuing loss of membership to our state and local medical societies. The American Medical Association through its emphasis on direct membership continues to grow but at a cost to the federation. If this bleeding is allowed to continue, an anemic state organization will surely collapse.

All of you here are present because you believe in the purpose, and in large measure, the goals of the Missouri State Medical Association.

If each one of you would commit yourself and bring in one member, our organization would flourish and our goals would be attainable. We would have the opportunity to address some of the concerns in the next several days ahead.

Finally, I thank you for the high honor of having served as your president in the past year. Thank you. ■

MSMA GROUP INSURANCE

FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $200, $500, or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S) ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:

☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ____________________

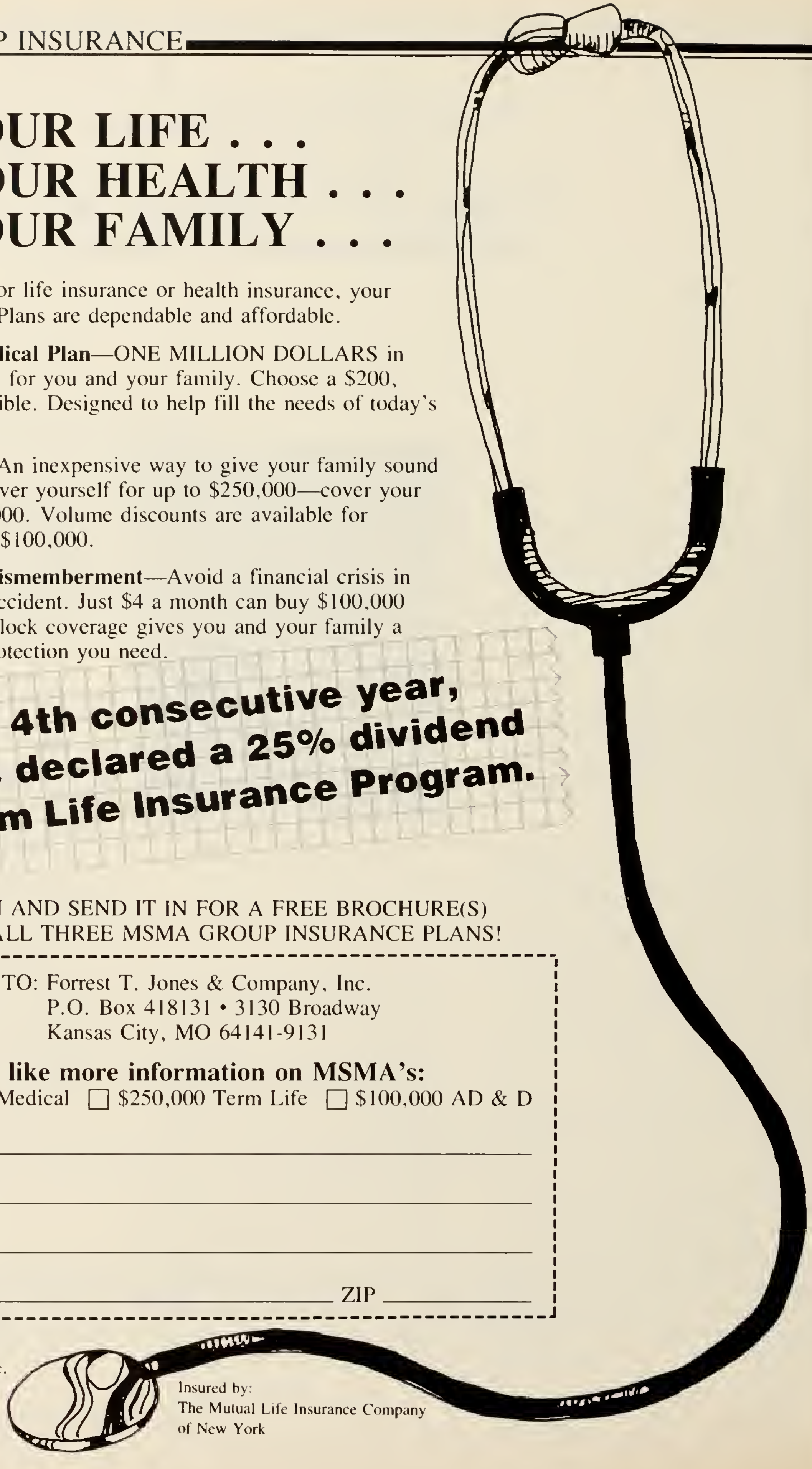
ADDRESS ____________________

CITY ____________________

STATE ________________ ZIP ________

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

Insured by:
The Mutual Life Insurance Company
of New York



Auxiliary Report

Eileen Dyer

Good morning. Mr. Speaker, Dr. Cooper, Dr. Ring, Delegates: I address you this morning regarding the Auxiliary activities of the past year.

I share my pride in serving the Auxiliary with more than 1200 of your spouses who also see this membership as an important advocacy for medicine. We now share with you the many accomplishments of your Auxiliary working for you and your community.

Many of you are aware that the Auxiliary usually has a theme focus for the year. I chose to emphasize our families, our friends and the future of medicine, using the pineapple as my symbol. We have a beautiful etched and carved art glass which we will be using as our membership award.

Mrs. Charles Barbee, the President-elect of the Auxiliary, will show that glass over to the side.

This award will be given to a lucky member during our Friday awards luncheon.

The base of the pineapple represents the family, our source of support and stability.

Our state health project was to assist in the distribution of the AIDS booklets to high schools across the state. Purchased by your association, the Auxiliary placed more than 3,000 of these books in our high schools. We learned more about AIDS education for teens at our fall conference from TEEN TAP, a peer education group in Kansas City.

At the conference, we also worked on medical marriage communication skills, a help to all medical marriages.

Eileen Dyer

Counties have focused on their families also with programs on teen suicide prevention, peer pressure reversal, smokeless tobacco, health education for grade schoolers, financial planning, and distribution of our state brochure on Parties and Teens.

Our friends in both the medical community and the communities in which we live, represented by the body of the pineapple, have both benefited from our Auxiliary efforts this year.

Community health fairs, preventive health education, legislative forums to educate ourselves as well as others, personal contact with our senators and representatives on health issues, election year "Meet the Candidate" sessions, blood drives and well - baby clinics — all of these areas of service have impacted those around us.

In cooperation with the Illinois State Medical Society Auxiliary, we provided a most successful leadership seminar for our Auxiliary friends in Illinois, Missouri, and surrounding states.

I know many of you just recently enjoyed a variety of celebrations sponsored by our Auxiliary for Doctors Day, March 30, 1989. In your honor Governor Ashcroft signed a proclamation recognizing your skills, dedication, service to your communities and improving the quality of life for all.

Our future, as reflected in the top green leaves of the pineapple, is benefited by our work for medical education and research. Through county and state fundraisers for AMA Education and Research Foundation and for the Missouri State Medical Foundation, we have continued our strong guarantee of quality medical education and the continuation of medical research.

Today it will give me great pleasure to present checks to the medical schools. Tonight you will have the opportunity to help us continue this excellent support by your attendance at the President's Reception for Dr. Cooper and myself.

Everyone is invited to attend this reception which is entitled Pineapple Pizzazz and St. Louis Jazz. At any time before the event or at the reception you are invited to make a contribution in support of your medical school and make that through the

Auxiliary.

An informational flier was in the front of your Delegate's handbook on bright yellow paper. There are also informational fliers at the Auxiliary registration desk and there is an Auxiliary member there to take your contribution if you stop by.

Remember, your support helps us in three ways:

1. Your county receives credit for your contribution.
2. Our state Auxiliary receives credit at the national level for awards.
3. And, most importantly, your medical school benefits with increased availability of funds for research or student loans.

You will be honored tonight with a special ribbon to wear to the reception and during the convention.

Please continue your excellent support of the future through this Auxiliary event.

You may also choose to direct your gift to the Missouri State Medical Foundation if you are to support the student loan fund for Missouri students in medicine. Just make your check out to the appropriate fund.

Come join us tonight and listen to the lively entertainment of The Jazz Incredibles from St. Louis and I hope you will just come and enjoy this fun event. I know this is kind of a highlight event for us at the convention and we certainly would encourage your continued support tonight.

I will thank you ahead of time for your support of this event.

In addition to fund raising, our future has focused on legislative involvement and information. Registration of young adult voters this spring will take place in many high schools across our state sponsored by the Auxiliary in that area.

Our Annual Legislation Day was most successful in opening doors of communication and information with our legislators.

Support for the state PAC and Key Contact Program are also priorities for us.

A new involvement this year allowed us to participate on the Physician's Health Committee Program. We look to a healthy future for our state physicians and for their families through our informational brochure for families and our new resource lending library.

Our activities in each arena overlap intricately with each other. We cannot separate our family or our friends from our future and we cannot close our eyes to the challenges and needs of medicine today.

The importance of the county, state and national federation has never been more recognized. Our membership efforts and involvement remain critical as we look to the future of the profession of medicine.

I am deeply grateful for the support of Dr. Cooper and the MSMA Council, especially the Council Chairman, Dr. Dyer.

I thank the cooperative MSMA staff, in particular our liaison Susan Gold, and I thank you very much for your attention today, for your support tonight, and for our future together.

On behalf of the Auxiliary, I wish you a most successful 131st annual meeting. Thank you.

"I switched to occurrence coverage without paying for a tail."

The Claims Made Trap. If you're caught in it, there's no easy way out. The only way to switch to occurrence, the coverage preferred by most doctors, has been to pay an expensive tail premium. Until now.

Medical Protective, the company that invented professional liability insurance 90 years ago, has a solution. Convertible Claims Made. Now you can get back to occurrence without buying a tail.

And when you choose Convertible Claims Made with Medical Protective, you not only get back on the road to occurrence, you get coverage with one of the most trusted and highly regarded professional liability carriers in America today. For the past 90 years, defending and insuring physicians, surgeons and dentists has been our only business. No one is more experienced or more committed. And our continuous A+ (Superior) rating from the A.M. Best Co. gives you the financial stability and strength that you need and expect from your professional liability carrier.

So, if you would like to escape the Claims Made Trap, look no further. Call us today and we'll show you how Convertible Claims Made makes it easy to step up to occurrence and Medical Protective.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

You didn't spend umpteen years in school in order to become a bill collector.

There's one critical procedure you're not adequately prepared to perform: inducing a flow of cash from slow-paying patients. Besides, you have far better ways to spend your time.

Which is why we suggest you engage the services of I.C. System.

First of all, we have the expertise and resources to do the job. What's more, we understand that we're dealing with *your* patients. You don't want to alienate or offend them. And we conduct ourselves accordingly.

In fact, our work is endorsed by over 1,200 professional associations and societies, including your own. And although we're headquartered in St. Paul, Minnesota, we have communication centers in every state of the union.

We'll assign a local I.C. representative to your account who will be supported by a full range of collection services and personnel, including carefully-trained telephone contact specialists. We'll even provide training on how to use our service for the person(s) in your office handling accounts receivable.

But most important, we *guarantee* results. Our fee structure combines a very competitive commission rate with a retainer (corporate or standard) scaled to your needs. And we guarantee to keep collecting for as long as it takes to recover *at least ten times the amount of that retainer.*

To find out how the I.C. System approach can work for you, call toll free (800) 443-4123, ext. 621. In Minnesota, call (612) 483-8201, ext. 621. Or return the coupon.

I.C. System®
The System Works.™

I want to recover the money that's owed me. Please provide me with information on the I.C. System approach.

Name____________________

Title____________________

Firm____________________

Address____________________

City____________________

State__________ Zip__________

Telephone number____________________

3385-1

Mail to: I.C. System, Inc.
444 East Highway 96, P.O. Box 64639
St. Paul, Minnesota 55164-0639

Resolutions

of the 131st MSMA House of Delegates

Resolution 1
Physician Grievance Board
Introduced by the South Central Medical Society

Resolved, that the MSMA set up a system whereby local societies may establish a physician grievance board to hear grievances brought by physicians in regard to third party payors, render judgment, and then make recommendations to the MSMA Council.

House Action: The above amended resolution was adopted.

Resolution 2
Equal Reimbursement Under Medicare — Legal Action
Introduced by the South Central Medical Society

Resolved, that the MSMA initiate legal proceeding against HCFA and its carriers and its intermediaries, such legal proceeding consisting of filing an amicus brief filed with the AMA at which time the AMA takes similar legal action to eliminate the discrimination between the reimbursement for rural Medicare patients and that for metropolitan Medicare patients by reimbursing providers in rural areas at the same rate as metropolitan providers.

House Action: The above resolution was adopted and referred to the AMA.

Resolution 3
Quindaro Landfill and Pollution of the Missouri River
Introduced by the West Central Medical Society

Resolved, that the Missouri State Medical Association opposes the Quindaro Landfill because of the probable medical harm to our citizens and their offspring, and be it further

Resolved, that the MSMA request the Environmental Protection Agency to develop stricter and more appropriate criteria for municipal solid waste landfills.

House Action: The above substitute resolution was adopted.

Resolution 4
Clean Air
Introduced by the West Central Medical Society

Resolved, that MSMA urge the AMA to enlist the support of its component medical societies to establish a grass roots coalition to assist with the implementation of AMA Resolution No. 142.

House Action: The above amended resolution was adopted.

Resolution 5
Malpractice Reform
Introduced by the West Central Medical Society

Resolved, that a system be developed to impose cost controls by: (1) limitation of total awards, (2) adopting current workers compensation schedules, (3) adopt reasonable statutes of limitations as is presently in effect in Missouri, (4) pay only for medical care, rehabilitation, and economic loss, (5) periodic awards, (6) modification of termination of benefits with changes and beneficiaries status, (7) offset of other insurance benefits, (8) elimination of joint and several liability, (9) an entry threshold, albeit low, (10) reasonable structuring of attorney fees (Midwest Institute of Health Care and Law, Oct. 1988), therefore be it

Resolved, to attain these cost controls a medical compensation system similar to workers compensation program is proposed.

Fiscal Note: Would be included in MSMA Budget for Tort Reform.

House Action: Referred to the MSMA Council.

Resolution 6
The Relationship Between Proposed MSMA Resolutions and Existing AMA Policy
Introduced by the Metropolitan Medical Society of Greater Kansas City

Resolved, that upon the initial receipt of a proposed resolution, the Missouri State Medical Association staff review existing American Medical Association policy and the Missouri State Medical Association policy and inform the resolution's author as to whether it contradicts (in whole or part) or merely rephrases (without significant addition) existing policy. Such authors might then choose to withdraw or rephrase the resolution prior to formal submission to the House for a vote; and be it further

Resolved, that when such resolutions reaffirming or conflicting with American Medical Association and/or Missouri State Medical Association policy remain submitted, then these resolutions be so designated by one of the following subscript notations:

"This resolution contradicts existing AMA (MSMA) policy" or
"This resolution already exists as AMA (MSMA) policy."

House Action: Adopted.

Resolution 7
Malpractice Testimony
Introduced by the Metropolitan Medical Society of Greater Kansas City

Resolved, that the MSMA Council develop guidelines defining qualifications, definitions and ethics of behavior for medical expert witnesses.

House Action: The above substitute resolution was adopted.

Resolution 8

False and Deceptive Advertising

Introduced by Norman Wall, M.D. and the Greene County Medical Society

Resolved, that the Missouri State Medical Association adopt the policy that the use of the term board certified in advertising should state the board and if it is a board recognized by the American Board of Medical Specialties, and that it be further

Resolved, if the board certification is not a board that is recognized by the American Board of Medical Specialties, or the comparable Osteopathic Board, they should be labeled self-designated, and that it be further

Resolved, this policy be transmitted to the Missouri State Board of Registration for the Healing Arts for incorporation into the general statutes of the State of Missouri Chapter 334.

House Action: Referred to the MSMA Council.

Resolution 9

Physician's Charity Program

Introduced by Gary A. Dyer and the Buchanan County Medical Society

Resolved, that the Missouri State Medical Association adopt 50 hours per year (approximately one hour per week) of hands-on medical care for the poor, by each physician, as the desirable level of giving, and be it further

Resolved, that each physician be encouraged to record (in hours rather than dollars) the amount of charity care given, and submit the total annually to MSMA, and be it further

Resolved, that charity care for the poor and indigent include those totally without funds (welfare patients) and Medicaid patients (only on that portion uncompensated by the State of Missouri), and be it further

Resolved, that MSMA recognize in MISSOURI MEDICINE, and by other suitable means, those physicians giving 50 or more hours of charity care per year, and be it further

Resolved, that MSMA use the accumulated data to tastefully state to the Missouri General Assembly and other interested parties that Missouri physicians **do** give their fair share of charity care, and be it further

Resolved, that MSMA encourage the Missouri General Assembly to develop solutions for the problems of the poor, so that the number is reduced, and that poverty does not become a way of life for successive generations of Missouri families, and be it finally

Resolved, that this resolution be introduced at the AMA level for consideration as the position of the AMA and all U.S. physicians.

House Action: Adopted.

Resolution 10

Mandatory Testing For AIDS

Introduced by Mark Cotner, M.D., and the Jasper County Medical Society

Resolved, that the MSMA strongly support the revision of current Missouri statutes to allow for the mandatory testing for HIV infection in any patient which undergoes emergency life-threatening treatment or emergency surgery where the physician or emergency personnel do not have the right to decline treating such a patient. This testing would be under the direction of the attending physician and based on the need to acquire the information to protect the associated medical personnel from the potential of an infectious disease. This would not be subject to the right of refusal.

House Action: Not adopted.

Resolution 11

Resident Physician Membership

Introduced by the MSMA Council

Resolved, that the requirements for resident physician membership be changed to encourage more physicians in training to become members of the Missouri State Medical Association; and be it further

Resolved, that to accomplish this goal, the MSMA bylaws be changed as follows:

Chapter IV, Section 5.

Each Councilor District shall be entitled to one Councilor for each 400 full paid members or portion thereof and full paid members of the Resident Physician Section training in that Councilor District as of December 31 of the preceding year. Each District shall be entitled to one Vice-Councilor.

Chapter IX, Section 1.

Membership. The Resident Physicians Section shall be composed of Resident members of the Missouri State Medical Association who are serving in approved training programs. [and who are active members of a component medical society. Residents may be direct members of the Resident Physician Section of the component society where the Resident resides if practice permits direct membership.]

(Language to be added is underlined; language to be deleted is in brackets.)

Fiscal Note: It is anticipated that possibly 350 additional resident physicians could be recruited. This would increase income to MSMA by $7,000.

House Action: Adopted.

Resolution 12

Hospital Medical Staff Privileges

Introduced by the MSMA Council

Resolved, that the Missouri State Medical Association affirm its support of existing state statutes and regulations that put forth requirements for hospital licensure and individual eligibility for medical staff privileges.

House Action: Adopted.

Resolution 13

Medicaid Parity

Introduced by the MSMA Council

Resolved, that the Missouri State Medical Association support a phased-in increase in the Medicaid physician fee schedule from 30%-35% to 75% of usual and customary charges; and be it further

Resolved, that the MSMA support an immediate freeze on all "optional" Medicaid services until all "mandated" services are at parity with one another and at a level greater than or equal to a percentage of the usual and customary charges for any optional service; and be it further

Resolved, that the MSMA support a mechanism to allow the physician fee schedule to keep pace with an economic index; and be it further

Resolved, that the MSMA support incentives for increased physician participation in the program, such as surcharges for increased Medicaid caseload; and be it further

Resolved, that the MSMA support simplification of the Medicaid application process to increase access, especially for pregnant women and new borns; and be it finally

Resolved, that the MSMA continue discussions with the Governor's office, the General Assembly, and the Department of Social Services to begin to institute these proposals.

House Action: The above amended resolution was adopted.

Resolution 14

Right to Forego Life Support

Introduced by the Cape Girardeau County Area Medical Society

Resolved, that the Missouri State Medical Association calls upon the Legislature of the State of Missouri to delete the phrase in Section 459.010 (3) of the "Missouri Declaration of Life Support" which defines providing artificial hydration or nutrition tube feeding as "not being a death-prolonging procedure"; and be it further

Resolved, that the Missouri State Medical Association supports additional legislation which affirms the rights of Missouri citizens to appoint a "Health Care Surrogate". This individual(s) could be chosen by a competent patient to act as his/her medical proxy in making health care decisions when patient decision making capacity is lost. Such duly appointed medical proxies should have power to approve or refuse any and all medical treatment, including food and water provided by artificial means (tube feeding), when the burdens of such treatment outweigh the benefits and/or such treatment would violate the wishes of the patient as known by the proxy. Missouri physicians therefore support prompt legislative approval of a Health Care Surrogacy Act or its equivalent to help ensure our citizens' right of self-determination; and be it further

Resolved, upon passage of satisfactory health care surrogate legislation and deletion of the restrictive phrase in Section 459.010 (3), MSMA will support and publicize the value of such legislative changes to Missouri citizens and to physicians and health related professions; and be it further

Resolved, that ethical decisions such as the right to refuse treatment be left to the individual, family and/or Health Care Surrogate, and not to the State.

House Action: The above substitute resolution was adopted.

Resolution 15

Equity in Medicare Reimbursement Fee Schedule

Introduced by the Cape Girardeau County Area Medical Society

Resolved, that the Missouri State Medical Association support the requirement that the Health Care Financing Administration or some other appropriate government regulatory agency develop an economic index which will be applied to each geographic Medicare payment area (known as a charge locality) which truly reflects the costs of delivering medical care in that area (including malpractice premiums, relative cost of ancilliary help, relative cost of office rental, etc.); and be it further

Resolved, that this economic index be applied to each of the Medicare charge localities as rapidly as possible to develop weighted average Medicare fee payments; and be it further

Resolved, that the economic index be calculated and reapplied at least every five years to provide variations in Medicare reimbursement levels which truly reflect the cost of health care delivery.

House Action: Not adopted.

Resolution 16

Licensing of Psychologists

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA oppose any effort to redefine the practice of psychology in any way that would prevent physicians from using the titles of psychotherapist and psychoanalyst, and be it further

Resolved, that the MSMA oppose efforts to remove psychologists from the jurisdiction of the State Board of Registration for the Healing Arts.

House Action: The above substitute resolution was adopted.

Resolution 17

MSMA 5-year Dues Payment Plan

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA Council implement a graduated dues payment plan in concert with a similar program implemented by the AMA and other component societies.

House Action: The above amended substitute resolution was adopted.

Resolution 18

Continue Tort Reform in Missouri

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA form a Task Force on Tort Reform to plan the next steps in this continuing effort; and be it further

Resolved, that the following items be studied: 1. collateral sources; 2. statute of limitations for minors be lowered from 20 years to 13 years or from six to three years in actions brought against health care providers; 3. Voluntary Alternative Dispute Resolution; 4. bifurcation of trials; 5. "cap" on non-economic damages; no ceiling on economic losses; 6. contingency fees for expert witnesses; 7. qualifications for expert witnesses; 8. "clear and convincing" evidence standard to supplement the current standard of "preponderance of evidence"; 9. joint tort feasor concept which enable judges to require defendants to pay their prorate share of damages if it is decided that multiple parties contributed to an injury; 10. plaintiffs who bring frivolous lawsuits should be required to pay attorney's fees and court costs; 11. disclose defense costs on request from defendant physicians at close of cases; 12. limiting the scope of legal doctrines designed to extend the liability of the medical community and of medical manufacturers beyond already generous boundaries (Kirk v. Michael Reese Hospital & Medical Center); 13. affidavit on non-involvement.

Fiscal Note: Would be included in MSMA Budget for Tort Reform.

House Action: Referred to the MSMA Council.

Resolution 19

St. Louis Regional Health Care District

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA support the Regional Health Care District in St. Louis City and County with a Director of Health who fulfills the Charter requirement of a Medical Doctor with public health training.

House Action: Adopted.

Resolution 20

Mammography Re-Visit

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA support a firm statement that screening mammography is good health care as outlined by such organizations as the American Cancer Society and the National Cancer Institute, and be it further

Resolved, that the MSMA encourage and support the Missouri Department of Health in developing plans of economic encouragement of screening mammography, and be it further

Resolved, that the MSMA state that screening mammography is necessary preventative health care, and therefore should be reimbursed by third party payors and other organizations, and be it further

Resolved, that MSMA encourage third-party payors in Missouri to voluntarily offer such benefits as screening mammographies, child health care and mental illness coverage, and be it further

Resolved, that MSMA encourage the State of Missouri to offer Medicaid recipients such coverages as screening mammographies, child health care, and mental illness benefits.

House Action: The above substitute resolution was adopted. (adopted in lieu of Resolutions #20 and #36).

Resolution 21

Federal Cigarette Excise Tax and Health Expense

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA recommend to the state legislature and the AMA recommend to Congress an increased excise tax on cigarettes which would have two purposes: a) to develop a fund over the years to pay for the health care costs of cigarette smoking; b) accept and acknowledge that besides the above purpose of this cigarette excise tax is the purpose to make it difficult and expensive for a person to smoke cigarettes, and that this is an incentive to encourage people to stop smoking by taxation.

House Action: The above amended resolution was adopted.

Resolution 22

Training for Use of New Vital Records Forms

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA cooperate with the Department of Health in interpreting the appropriate revisions to fit the needs of this State, and be it further

Resolved, that the Missouri Department of Health provide training to all those individuals of groups who have responsibility for completing birth, death, and fetal death certificates.

House Action: Adopted.

Resolution 23

Accountability of Third-Party Payer Review Activities

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the Missouri State Medical Association request publicly that all Medical and Osteopathic Doctors/Physicians who review medical care for the Health Care Financing Administration and who currently make Missouri Patient Care Review Foundation determinations or review medical care for other insurance companies assign their names and the date to their opinions in an open manner so that they may be open for public scrutiny, and be it further

Resolved, that the Missouri State Medical Association recommend that the individual review physician assume the responsibility for their actions, and be it further

Resolved, that "front names" be eliminated from determination letters so that third-party payer peer review activities be held accountable to the same standards as are plenary licensed physicians.

House Action: Referred to the MSMA Council.

Resolution 24

MSMA Committee on Biomedical Ethics

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA establish a Committee on Biomedical Ethics which will have an educational and supportive role as a forum for biomedical ethics to the physician, and be it further

Resolved, that the Committee on Biomedical Ethics develop and implement general guidelines in areas of medical care, and be it further

Resolved, that the Committee on Biomedical Ethics be active in support of legislation affecting medical practice.

House Action: Adopted.

Resolution 25

Nationwide Negotiating Rights for Physicians

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the Missouri State Medical Association support legislation that would allow a physician to be represented by his/her specialty, state or county medical society in negotiating fair and equitable fees with third parties, and be it further

Resolved, that the Missouri State Medical Association take appropriate steps to prepare and seek support for this legislation, and be it further

Resolved, that this resolution be forwarded to the AMA.
House Action: Adopted.

Resolution 26
Unregulated Insurers
Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA adopt Resolution #21, "Unregulated Insurers" (A-88) so that the state legislature be urged to enact such legislation to enable the Division of Insurance to collect data and act in a regulatory role for all manner of financial intermediaries acting as or for third party payers, including but not limited to PPO, IPA, and self-insured organizations in the same manner as the Division currently does for HMO and indemnity insurance companies, and be it further

Resolved, that the MSMA make this legislation on unregulated insurers a priority item for the upcoming legislative session.

House Action: Referred to the MSMA Council.

Resolution 27
MSMA Spouse Dues Plan
Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA initiate a 2/3 dues plan for both spouses and encourage the national and local societies to do likewise, with each spouse paying two-thirds dues, and be it further

Resolved, that the MSMA put this plan into action as soon as the details are worked out by the MSMA Council.

House Action: Not adopted.

Resolution 28
HMO "Warning Labels"
Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA House of Delegates act favorably with regard to Resolution #20 —"HMO Warning Labels" (A-88), in contradiction to the recommendation of the Committee on Legislative Affairs, as approved by the MSMA Council, and be it further

Resolved, that the MSMA make the enactment of "HMO Warning Labels" a priority item of the upcoming legislative session, and be it further

Resolved, that the MSMA Council and especially its Committee on Legislative Affairs not be timid or be intimidated in carrying out its obligation to represent the wishes of the majority of the practicing physicians of the State of Missouri.

House Action: Adopted.

Resolution 29
Elimination of Tuberculosis as a Public Health Problem
Introduced by William C. Banton, II, M.D., and the St. Louis Metropolitan Medical Society

Resolved, that the Missouri State Medical Association endorse the Strategic Plan for the Elimination of Tuberculosis as developed by the Centers for Disease Control Advisory Committee for the Elimination of Tuberculosis; and work with the Missouri Advisory Committee for the Elimination of Tuberculosis to help implement the policies of the Strategic Plan; and be it further

Resolved, that MSMA promulgate information on the appropriate methods for evaluating, diagnosing, treating and preventing tuberculosis; and be it further

Resolved, that the MSMA encourage and assist component medical societies to work with State, county and city health officials to achieve the long-range objectives of reducing the incidence of active tuberculosis in the United States to below 3.5 cases per 100,000 Americans per year by the year 2000, and one case per million before the year 2010.

House Action: Adopted.

Resolution 30
Continuing Medical Education for Missouri Licensure
Introduced by the Metropolitan Medical Society of Greater Kansas City

Resolved, that the Missouri State Medical Association recommend that the AMA and AOA Physician Recognition Awards be accepted unconditionally and on an ongoing basis as acceptable proof of continuing education.

House Action: The above amended resolution was adopted.

Resolution 31
Prospective Payment to Hospitals
Introduced by the Ozark Medical Society

Resolved, that the Missouri State Medical Association adopt as its official position and recommend to the federal government that the lower payments to rural hospitals as compared with urban hospitals for identical DRGs, are unfair and this differential should be abolished, and be it further

Resolved, that our delegates to the AMA take this resolution to the AMA and seek its adoption as the AMA policy.

House Action: Adopted.

Resolution 32
Health Care Costs
Introduced by the MSMA Ad Hoc Committee on "Sunsetting"

Resolved, that the Missouri State Medical Association encourage individual physicians to do their part in helping moderate increases in health care costs by avoiding overutilization and using restraint when considering fee increases, in order to keep them in line with general cost of practice increases.

House Action: The above resolution with editorial change was adopted.

Resolution 33
Study of No Cost Drugs to Addicts
Introduced by the Metropolitan Medical Society of Greater Kansas City

Resolved, that the AMA Trustees be directed to study the impact which provision of drugs at no cost to registered and tested addicts would have upon crime rates, the economy and drug usage in the United States.

House Action: Not Adopted.

Resolution 34

Referendum on Malpractice

Introduced by Richard A. Heimburger, M.D., W. Richard Morgan, M.D., and the Greater Kansas City Area Plastic Surgery Society

Resolved, therefore let the MSMA sponsor a petition drive for a referendum to the public to pass a new malpractice bill in the State of Missouri modeled after the California legislation, to eliminate joint and several liability, establish a $250,000 limit for non-economic damages to the plaintiff as prescribed by jury, establish a graduated contingency fee scale based on the amount of the economic damages with a maximum fee of $80,000 and require proof of negligence for a judgment of malpractice.

Fiscal Note: Approximately $2,000,000.

House Action: Referred to the MSMA Council.

Resolution 35

Neutrality on Abortion-Related Issues

Introduced by Alan Braun and John Lyskowksi, Jefferson City, and Lawrence Rettenmaier, Columbia

Resolved, that MSMA refrain from interceding, either pro or con, in any abortion-related court case or legislative proposal, and be it further

Resolved, that the Missouri Delegates to the American Medical Association introduce a resolution with these provisions in the AMA House of Delegates, and which would specifically instruct the AMA Board of Trustees to refrain from filing amicus briefs in any future abortion-related court case.

House Action: Tabled to Annual Convention 1990.

Resolution 36

Mandated Benefits in Health Care Insurance Coverage

Introduced by the St. Louis Metropolitan Medical Society

See Resolution #20

Resolution 37

Regulation of Ordering Laboratory Studies and Diagnostic Tests

Introduced by the MSMA Council

Resolved, that with the exclusion of the not-for-profit health fairs, the MSMA is opposed to and considers unethical the practice of ordering laboratory studies and other diagnostic tests without evidence or indication obtained by the physician in a history and physical examination.

House Action: The above amended substitute resolution was adopted.

Resolution 38

Medicare Programs: Reasonableness of services; medical necessity of services; appropriateness of inpatient setting; substandard medical care

Introduced by Jon F. Snow, M.D., and the Greene County Medical Society

Resolved, that an ad hoc committee or task force be appointed with at least one member from each of the county medical associations to directly address the crisis of the recent Federal intervention in treatment of the Medicare patient, and be it further

Resolved, this ad hoc committee or task force could coordinate the medical, political, and legal problems the Omnibus Act has created.

Fiscal Note: Unknown.

House Action: Adopted.

Courtesy Resolution on Deceased Members

WHEREAS, there have been 66 deaths among members since the 1988 Convention, and

WHEREAS, each of these members is missed as an individual as well as for his/her contributions to the practice of medicine and to the Missouri State Medical Association, and

WHEREAS, the loss of each member is felt by all members, as well as his/her loved ones, and close associates and the patients he/she has served with dedication, therefore be it

RESOLVED, that the House of Delegates now pay personal tribute by standing for a moment of silence in memory of each of the 66 members we have lost and whose names will be recorded in the minutes of this Annual Convention.

Von Lintel, Thomas A.
Metro. Med. - K.C.
Stewart, Wellington B.
Boone
McAfee, C. Alan
St. Louis Metro.
Hayek, Wesley E.
St. Louis Metro.
Busiek, Urban J.
Greene
Allen, Hollis
St. Louis Metro.
Rainwater, Elmer H.
Greene
Maher, Thomas F.
St. Louis Metro.
Jaudon, Joseph C.
St. Louis Metro.
Flynn, Joseph E.
St. Louis Metro.
Ellsworth, Willard
Grand River
DeMott, John D.
Metro. Med. - K.C.
Crowe, John T.
Cape Girardeau
Adams, Harold D.
Boone
Walker, Paul W.
Jasper
Stergen, Nick E.
St. Louis Metro.
Mitchell, Roy E.
Mid-Missouri
McBurney, C. Alex
Saline
Hagar, David L.
Metro. Med. - K.C.
Wiggins, Roland L.
Boone
Viamontes, Gloria E.
St. Louis Metro.
Sprual, James H.
St. Louis Metro.
Palazzo, Frank A.
St. Louis Metro.
Millangue, Rafael M.
St. Louis Metro.
Howe, Louis F.
St. Louis Metro.
Herman, Morris
St. Louis Metro.
Grubb, Paul H.
Jasper
Gifford, Phillip S.
Metro. Med. - K.C.
Gentry, Merritt L.
Greene
Garrett, Glen H.
Boone
Diehr, Maurice A.
St. Louis Metro.
Berard, Louis N.
St. Louis Metro.
Zahorsky, Theodore
St. Louis Metro.
Spalding, W.B.
Clinton
Reese, A. Victor
St. Louis Metro.
Maxwell, Richard W.
St. Louis Metro.
Kelling, Douglas G.
Metro. Med. - K.C.
Denner, Joseph L.
Metro. Med. - K.C.
Upsher, Albert E.
Metro. Med. - K.C.
Moon, Thomas R., Jr.
St. Louis Metro.
Hughes, Shelby B.
Henry
Coburn, Donald F.
Metro. Med. - K.C.
Broyles, Watkins A.
Grand River
Alvis, Edmund B.
St. Louis Metro.
Williams, John W.
Lafayette-Ray
Moore, Alva
St. Louis Metro.
McGannon, Paul T., Sr.
Metro. Med. - K.C.
McCorkle, E. Lee
Saline
McClanahan, Robert C.
Metro. Med. - K.C.
LoPiccolo, Vincent J., Sr.
St. Louis Metro.
Bruner, Robert E.
Metro. Med. - K.C.
Piepergerdes, Larry G.
Metro. Med. - K.C.
Miller, David D.
Greene
Lachance, Leopold
Boone
Gantner, George E.
St. Louis Metro.
Vaughan, J. Russell
St. Louis Metro.
Wood, Tommy L.
St. Louis Metro.
Sciortino, John S.
St. Louis Metro.
Reuter, Louis A.
St. Louis Metro.
Orenstein, Joseph A.
St. Louis Metro.
Ness, Carl K.
Buchanan
Murphy, Robert J.
Metro. Med. - K.C.
Blair, Vilray P., Jr.
St. Louis Metro.
Bilsky, Nathan
St. Louis Metro.
Berger, Edward J.
St. Louis Metro.
Macauley, Bernard
Butler-Wayne-Ripley-Carter

Committee and Commission Reports

Committee on Planning

The MSMA Committee on Planning did not have a formal meeting this past year. The agenda developed by the Strategic Planning Committee in 1987 provided a satisfactory framework for 12-18 months for the MSMA.

In 1989 we anticipate that our committee meetings will be based on the results of the first 12 months of the agenda of the Strategic Planning Committee and the results that have been obtained through the various committees and commissions.

Phillip M. Hornbostel, *Chairman*
Sam L. Farrell
Stephen C. McCray
Robert R. MacDonald, Jr.
Douglas Paone
Carl Kruse
Mark C. Kasten
Otis Moseley
Dan T. Sullivan
Bruce Preston

The Commission on Public Affairs

The Commission on Public Affairs met October 22, 1988, in Jefferson City.

The Commission members made two suggestions for projects to be undertaken by the Association in the future. The first was publication of a set of patient information brochures that could be used as enclosures with billing statements.

Second, the Commission suggested a packet of information be made available to new members. This package would include information about the association, member services, participation opportunities, and member benefits.

Several ongoing projects were reviewed and endorsed for continuation.

Barry J. Bass, *Chairman*
R. Robert Hatlelid
Lawrence A. Rues
Robert J. Olson
Robert P. Wankum
Edmond B. Cabbabe
Herbert K. Dixon
Michael J. Bukstein
Carlo P. Caciolo
Marla J. Tobin
Michaele M. Penkoske
Jo-Ellyn M. Ryall
Joe E. Belew
Carl Doerhoff
Warren C. Lovinger, Jr.

Committee on Publications

The 85th volume of MISSOURI MEDICINE contained 24 scientific articles, three feature stories, six special editorials and 12 special articles. Each issue had an average circulation of 6443.

Throughout the year, MISSOURI MEDICINE featured original artwork created or owned by eight MSMA members with Missouri artists' work appearing on four covers. Special recognition came from Sandoz Pharmaceuticals who honored MISSOURI MEDICINE with an "honorable mention" in their 1988 Medical Journalism Competition. The journal was cited for excellence in design and editorial qualities.

Two special issues were produced in 1988. The May issue highlighted the state's four medical schools and the September issue featured emergency medicine articles and editorials. As in past years, the July issue contained the proceedings from the MSMA Annual Meeting and the August issue contained the annual membership directory.

After serving six years as editor, Jordan W. Burkey, M.D., of Springfield "retired" and became editor emeritus of the journal. The MSMA Council appointed Donald G. Sessions, M.D. of St. Louis as editor and Ramona Chapman, M.D. of Joplin as associate editor. The editorial transition took place with the May issue.

The editors wish to express appreciation to all who submitted scientific manuscripts and to those who contributed editorials, special articles and other input to the journal. The complete financial report for the 1988 journal is included in the financial statement of the Missouri State Medical Association. The report is published in the March issue of MISSOURI MEDICINE and is included in the Delegate's Handbook.

Donald G. Sessions, *Chairman*
Ramona Chapman
Jack J. Curtis
John S. Daniels
Stephen Hamburger

Ad Hoc Committee on Sunsetting

The Ad Hoc Committee on Sunsetting held a conference call January 18, 1989.

The Committee recommends the retirement of the following MSMA policies:

Cost Effectiveness: The MSMA encourages individual physicians to help moderate increases in medical care costs by avoiding overutilization and by using appropriate restraints to keep fee increases more in line with annual cost-of-living expenses. The Association endorses the Voluntary Effort to restrain increases in hospital costs.

Drinking Age: The MSMA supports legislation at the state and national levels to raise the legal drinking age to 21 years of age.

Immunization: The MSMA supports legislation that would establish strong immunization requirements for preschool children.

Unpaid Accounts, Interest: It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note for professional services not paid within a prescribed period of time, nor is it proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection.

It is not improper, however, for a physician to add a service charge, equal to the actual cost of rebilling, on accounts not paid within a reasonable time. Patients must be notified in advance about the existence of this practice.

Robert V. Tompson, *Chairman*
Arturo C. Montes
Alan L. Braun
Fred W. Hahn
Duane Hellam

Committee on Constitution and Bylaws

The 1988 report of the Strategic Planning Committee recommended a change in the statement of purpose that appears in the MSMA Constitution and Bylaws. This recommendation was adopted by the Council, then submitted to the 1988 House for a preliminary vote, which was affirmative.

According to the MSMA Constitution, any article of the Constitution may be amended by a two-thirds vote of delegates present and voting in any Annual Convention, provided the amendment shall have been presented in the previous open meeting of the House and that the amendment shall have been published twice during the year in the Journal or sent to each component society at least two months prior to the meeting at which final actions are to be taken. The following changes are presented for final action in the 1989 House.

(The bracketed material would be deleted; underlined material would be added.)

Constitution

Article II. [Purpose]

[The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.]

Article II. Mission

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

(A similar change, approved by the 1988 House, is necessary in Chapter XVI of the Bylaws, but a second, final vote is not needed to amend the Bylaws.)

At the May 1988 meeting of the Council, a Bylaws amendment was proposed that would change the name of the Committee on Physician Rehabilitation. The following Bylaws change is submitted for consideration by the 1989 House (bracketed material deleted; underlined material added):

Chapter VII. Committees and Commissions

Section 1. Standing Committees of the Missouri State Medical Association, the chairmen of which shall be appointed by the Association President unless otherwise provided in these Bylaws, will be as follows:

Executive Committee.
Committee on Constitution and Bylaws.
Committee on Publication.
Committee on Legislative Affairs.
Committee on Planning.
[Committee on Physician Rehabilitation.]
Physicians Health Committee.

The [Committee on Physician Rehabilitation] Physicians Health Committee shall consist of members of the Association appointed by the President for a term of three years. The [Committee on Physician Rehabilitation] Physicians Health Committee shall plan and execute programs of professional assistance for members of this Association who may require assistance to continue or return to their professional activities.

Douglas B. Bogart, *Chairman*
E. Richard Graviss
Sivaprasad D. Madduri
Jagadishwar Devkota
James A. Murphy

Committee on Constitution and Bylaws

Supplemental Report

The 1988 MSMA House of Delegates adopted a resolution that waives the dues requirement for members who have been elected to state or federal political office.

Accordingly, the following amendment to the MSMA Bylaws is submitted to the 1989 House of Delegates:

Chapter I. Membership

Section 3. There shall be [four] five classes of members as follows:

(intervening four paragraphs remain unchanged)

Special Dues-Exempt members shall be limited to those members of component societies who have been elected to the U.S. Congress, branch of the state or federal government. They shall be exempt from the payment of dues until the term of their political office expires, and shall enjoy all the privileges of active membership.

Commission on Continuing Education and Health Manpower

The Commission on Continuing Education and Health Manpower met on August 22, 1988, via a phone conference, to review moderator critiques for the specialties that sponsored scientific programs during the MSMA 130th Annual Convention. Commission members determined that the program evaluation form should be modified to obtain additional information regarding the speakers.

As a result of the excellent scientific programs, it was noted that the attendance was larger at the 130th Annual Convention than in previous years. The specialties were commended for their outstanding scientific programs.

The commission members reviewed the proposed rule 4 CSR 150-2.110 – Continuing Medical Education, which would require physicians to obtain at least 25 hours of approved CME during the twelve months immediately preceding the registration renewal date during the time period of February 1, 1988 and ending on January 31, 1991.

The commission will utilize MISSOURI MEDICINE to publicize that the MSMA is recognized as an intrastate accreditor for organizations and institutions desiring to be recognized as a sponsor for continuing medical education. Interested organizations and institutions are encouraged to contact the MSMA office to obtain additional information regarding this process.

During 1988, the commission has approved the following institutions and organizations as a sponsor for continuing medical education:

Fairfax Community Hospital
St. John's Mercy Hospital
Lee's Summit Community Hospital
Greene County Medical Society
Incarnate Word Hospital
Kansas City Society of Ophthalmology and Otolaryngology
St. Luke's Hospital
John Fitzgibbon Memorial Hospital
The Memorial Community Hospital Association

William D. Bradshaw, *Chairman*
Gerald J. Duling
Harry Miller
Gerald Bart
Purificacion Florendo
Turner L. Minnigerode
Dwight L. Deardeuff
George X. Trimble
Michael R. Freeman

Raymond O. Frederick
John Renner
Robert B. Brigden
W. Wayne Boydston
Luis Anglo
Edward Jenkins
Raymond Caffrey,
Councilor Advisor

Missouri Physicians' Health Committee

The Physicians' Health Committee met on May 16, August 20, October 15, 1988, and January 7, 1989.

Upon the resignation of Theodore Roberts, M.D., Jack L. Croughan, M.D., Psychiatrist, St. Louis, was elected to be the Medical Director for the Physicians' Health Program, effective April 1, 1988.

The committee proposed a change in the name of the Physician Rehabilitation Program. The term "impaired" seems all too often associated with a sense of incompetence and a more positive emphasis would be appropriate; therefore, the committee recommended that the name of the Physician Rehabilitation Program be changed to the Missouri Physicians' Health Program (PHP).

Dr. Croughan discussed the advantages of deleting the function of primary treatment for physicians enrolled in the program. He expressed his concern with the inherent conflict between the concepts of treatment and monitoring. Removing direct treatment from the MSMA would better focus the thrust of the program. It was the consensus of the committee to delete the primary treatment function for physicians enrolled in the Monitored Treatment Program.

The Physicians' Health Program may be viewed as a sophisticated Employer Assistance Program (EAP). In such programs, the personnel involved in running and supporting these programs are not actively involved in treatment as a primary function. Their major role is to facilitate the delivery of that treatment.

One of the primary objectives of this committee was to develop a Policy and Procedure Manual to help physicians understand the rationale and procedures of the MSMA Physicians' Health Program. The intent of this manual is to set forth committee procedures by presenting (1) the position of the American Medical Association (AMA) and the Missouri State Medical Association on the issue of physician impairment, (2) the present form of the MSMA Physicians' Health Program and (3) a brief synopsis of the mechanics of intervention. This document will be consistently changing as program activities are refined. Following a thorough review of this document, the committee approved the Physicians' Health Program Policy and Procedure Manual.

The Physicians' Health Program has a new phone number for individuals seeking information or making a referral. The Medical Director and/or Program Coordinator will respond to each call. The number is (314) 768-4990.

All communications are kept strictly confidential.

The committee discussed a mechanism to collect $11,500 in outstanding charges that accrued during the fiscal year 1987, as a result of program participants' activities in group sessions and costs associated with obtaining urine screens. Several of the program participants, active in the last quarter of 1987, have dropped out of the program. Collection of these outstanding charges would be extremely difficult.

It was the recommendation of the MSMA accountant that the Physicians' Health Committee make a concerted effort to collect these outstanding charges before MSMA writes off these charges.

The committee discussed the need to clarify the following Statement of Relapse for program participants that was adopted and approved by the MSMA Executive Committee and the Physician Rehabilitation Committee on May 8.

If at any time the MTP staff receives clinical evidence of my inability to function at the high level demanded of a practicing physician, or if there is proof I have had chemical relapses, or if I become noncompliant with the provisions of this contract, or if I fail to comply with the therapeutic recommendation of the MTP staff, I hereby authorize the Medical Director of the PRP to assign my case confidentially (using my code number) to a subcommittee of the PRP committee, and subsequently to a panel of representatives from the Executive Committees of both professional associations. I understand that the final recommendation of these committees may be referral of my case to the Board of Healing Arts for possible disciplinary action.

The proposed changes are as follows:

If the MPH staff receives sufficient evidence of the program participant's inability to function at the high level demanded of a practicing physician, or if the program participant is noncompliant with either the specific provisions or spirit of his contract, the Medical Director of the MPH shall present the program participant's case confidentially (using an assigned code number) to a subcommittee of the MPH Committee, and subsequently to a subcommittee of the MSMA Executive Committee. The final recommendation of this committee may be to refer the case to the Board of Healing Arts for possible disciplinary action.

In order to publicize the Physicians' Health Program, committee members and the Hotline number will be regularly publicized in MISSOURI MEDICINE, develop educational programs which will be directed to hospital medical staffs, work closely with the hospital medical staff section, and develop a brochure regarding the services of the MPH Committee. The MPH Medical Director and Program Coordinator are committed to establishing a close working relationship with the State Board of Registration for the Healing Arts and the four medical schools in Missouri.

Ms. JoAnne Hodgman, Program Coordinator, announced her resignation effective December 15. JoAnne intends to further her education and will remain accessible to the Physicians' Health Committee as a consultant. Ms. Karen Sanders has been appointed to replace JoAnne as Program Coordinator.

The committee reviewed a legal memorandum regarding the definition of a peer review committee members' liability and physician-patient privilege and confidentiality. This memorandum stated the interpretation of the language of Section 537.035 (peer review committees' proper scope of activity) indicates that the scope of review is limited to MSMA members only. If the Physicians' Health Program Committee expands its scope of inquiry to include all physicians, it would conflict with Section 537.035. Moreover, in order to maintain immunity from civil liability, the committee must maintain its established scope of inquiry and must restrict its investigations and review to that scope. Immunity will only be maintained so long as the acting committee member of physician's acts are performed in good faith without malice, and are reasonable related to the scope of inquiry of the peer review committee.

Peer review committee proceedings are privileged to the extent that they relate to the health care provided a patient. Confidentiality regarding such proceedings is required by Section 537.035. Both the privilege and confidentiality requirements are subject to numerous exceptions. These exceptions were discussed in the memorandum.

There was considerable discussion as to how to handle members of MSMA that are currently in the Physicians' Health Program. Participants will be informed that membership in MSMA is required. They may apply in a routine manner with or without a request for hardship assistance as they individually choose. It is felt that the routine application procedure will best ensure confidentiality.

Effective January 1, 1989, program participants will be required to provide payment for drug screens at the time specimen is collected. If valid payment is not included with urine and/or blood specimen, the appropriate testing procedures will not be performed and the program participant will, therefore, be considered noncompliant with the Advocacy Agreement.

Recognizing that the MPH Program is the Missouri State Medical Association's largest budget expenditure, it is essential that each committee member take an active role to enable the program to achieve its full potential. As a priority, the committee identified potential sources for additional program funding. The three major sources of funding identified are as follows:

county medical societies
hospital medical staffs
Missouri malpractice companies

The committee members agreed to personally contact county medical societies and hospital medical staffs in their respective districts to make arrangements for educational programs regarding the MPH Program. When making presentations to the hospital medical staffs, the committee agreed that $10 per physician would be an appropriate level of financial support from the hospital medical staffs to the MPH Program. It was also discussed that the hospital administrations might also match the contribution from the hospital medical staffs.

The committee agreed that it would not be unreasonable for the program participants to defray the costs incurred in this program. The MSMA will bill all new program participants over a five year period of time, $50 per month to defray program costs beginning on the 13th month of participation. This amount may be reduced, delayed or waived at the discretion of the MPH Program Medical Director.

The MSMA Annual Convention provides an excellent opportunity to sponsor an educational program regarding the MPH activities. The committee expressed a desire to sponsor an Intervenor Seminar during the MSMA 131st Annual Convention.

John P. Carmody,
Chairman
Jack L. Croughan,
Medical Director
Karen Sanders,
Program Coordinator
Hugh C. Bartlett
Jo-Ellyn M. Ryall
David White
Clyde M. Burnham
James R. Criscione, Jr.
Carl Pearman
Edward C. Felker, III
Thomas M. Ahmann
William I. Stryker
C. E. Ridenhour
Donald McIntosh
Mrs. Eileen Dyer
Mrs. Pattye Barbee

Commission on Medical Economics, Third Party Medicine, and Governmental Relations

The Commission on Medical Economics, Third Party Medicine, and Governmental Relations met on July 16, 1988 in Jefferson City, Missouri.

The Commission studied three referrals from the MSMA Strategic Plan by the Council:

1) Educate the public about socioeconomic issues,

2) Conduct workshops for physicians and their staff on "the rules of the game," and

3) Intervene on physicians' behalf with third-party payors.

Generally, the Commission felt that MSMA was currently pursuing these objectives and recommended that staff continue its work in these areas.

The Commission also received several resolutions as referred from the 1988 Annual Convention:

A) Resolution #7 – "Mandatory HMO Enrollment"
Recommendation: The Commission recommends to the Council that MSMA staff, and possibly outside legal counsel, investigate this. The Commission felt that they could not take any additional action until more information is obtained.

B) Resolution #10 – "Encroachment of Third Parties in Patient - Doctor Control of Medical Care"
Recommendation: The Commission recommends to the Council that no further action is required at this time.

C) Resolution #15 – "Regulation of Ordering Laboratory Studies and Diagnostic Tests"
Recommendation: The Commission discussed the fact that adopting the resolution would cast a dark cloud of uncertainty over the entire scope of testing and screening. It recommends that the resolution not be adopted.

D) Resolution #20 – "Interest in Promoting Truth in Advertising"
Recommendation: The Commission recommends to the Council that a warning label appear on all HMO, IPA, PPO and self-insured group health plans admonishing prospective enrollees that participation in the plan might "severely restrict your choice of physicians and hospitals." The Commission further recommends that the phrase, "and may involve financial incentives which may adversely restrict health care," also be included in the warning. Additionally, the Commission recommends that this resolution and the "warning label" outlined above be referred to the Legislative Committee. The Commission mentioned in discussion that because of the large number of medical and health bills in the General Assembly that this legislation should not command a #1 ranking under the MSMA Legislative Program.

E) Resolution #21 –"Unregulated Insurers"
Recommendation: The Commission noted that "non-self-insured" PPOs, IPAs, and HMOs were not clearly included in the resolves. It recommends that the Council refer this to the MSMA Committee on Legislation and that the language be carefully drafted to bring all unrelated entities under state regulation. It further recommends that support should be given to the concept that "any entity that sells medical and/or health insurance in the State of Missouri should be regulated by the State whether or not they are traditional indemnity carriers".

F) Resolution #23 –"Reimbursement of Hospitals Receiving Transfer Patients"
Recommendation: The Commission studied recent AMA action and the June 16, 1988 HCFA rule proposal concerning this subject. It believes the intent of the resolution has now been carried out and no further action is required.

G) Resolution #34 –"Unnecessary Government Intrusion Into the Practice of Medicine"
Recommendation: The Commission agrees with the resolves, but does not feel that any action is needed at this time as most of this has been incorporated into the MSMA Strategic Plan.

In further action, the Commission discussed the "medically unnecessary" problems with Medicare carriers and HCFA, and reviewed the proposed Board of Healing Arts definition of "The Practice of Medicine."

Charles W. Chastain,
Chairman
Nicholas F. Robinson
Melvin R. Hayden
John D. Davidson
James J. Bass
Carl Strauss
Martha Reed
F. David Muegge
Lewis C. Vollmar, Jr.
Clarence C. Reynolds
Gerald Moritz
T. J. Cooper
Jeff Schulman
Gerald Hoxworth
Milamari A. Cunningham

Commission on Medical-Legal Affairs

On February 11, 1989, a joint meeting was held with MSMA, MAOPS, and the Missouri Bar. The conjoint committee made several recommendations:

1) It was agreed that a subcommittee would be formed to redraft and redesign the Interprofessional Code for Physicians and Attorneys to reflect recommended changes in the medical records section.

2) Senate Bill 139, which would establish a health care surrogate law, needed polishing, and a subcommittee was formed to clean the proposed bills language.

3) House Bills 387 and 543, which would provide civil immunity for certain volunteers, should be opposed until the definition of "volunteer" is corrected and other troublesome language is deleted.

4) House Bill 611 and Senate Bill 275, which would amend Missouri's expert witness laws, provides much too much latitude to expert witnesses and significantly lessens the burden of proof on plaintiffs. The bills should be opposed.

This was the only meeting of the Commission on Medical-Legal Affairs prior to the Annual Convention.

Richard H. Fallon,
Chairman
Chris K. Fotopolous
Mario Coronado
Joseph A. Corrado
Nancy Abdou
Richard J. Gimpelson
Stephen Vilmer
William E. Stricker
Andrew B. Kaufman
Thomas C. Sparkman
Curtis C. Cox
Natu Patel
Benjamin I. Albano
Ralph Braunschweig
Garth S. Russell

Commission on Interspecialty Medicine

The Commission on Interspecialty Medicine did not meet this past year. However, individual members of the Commission have been active.

The MSMA uses the specialty members of this Commission to comment on various state-promulgated rules, legislative proposals and individual policy statements concerning their respective specialties. This does provide a close liaison between the various specialty organizations and MSMA.

J. Regan Thomas, *Otolaryngology — Head and Neck Surgery*, **Chairman**
Gerald Shatz, *Allergy*
James Alyea, *Anesthesiology*
Peter Muelleman, *Dermatology*
Timothy Turner, *Emergency Physicians*
David Hall, *Family Physicians*
William J. Crowley, Jr., *Neurology*
Paul E. Stohr, *Neurosurgery*
Larry W. Piebenga, *Ophthalmology*
Michael S. Clarke, *Orthopaedics*
Robert W. Brangle, *Pathology*
Robert Edmonds, *Pediatrics*
Richard A. Heimburger, *Plastic and Reconstructive Surgery*
Charles R. Kelly, *Physical Medicine and Rehabilitation*
Richard T. Quick, *Psychiatry*
Edward H. Andres, *Surgery*
Thomas A. Beller, *Thoracic*
Dana Weaver, *Urology*

Judicial Council

The MSMA Judicial Council has had no items referred to it during the past year. Perhaps it would be worthwhile for us to discuss our Council and its regulations. This is placed in the House of Delegates Handbook for information only.

Pursuant to the authority and responsibility vested in it under the provisions of Article VI of the Constitution and Chapter XI of the Bylaws of the Missouri State Medical Association, the Judicial Council of the Association does hereby promulgate the following rules and regulations concerning the judicial mechanism.

GENERAL

The Missouri State Medical Association's Constitution provides:

"Article VI. The Judicial Council shall be the judicial body of the Association. It shall consist of five active members nominated by the President and elected by the House of Delegates."

The Missouri State Medical Association's Bylaws provide:

"Chapter XI, Section 1. The Judicial Council shall have original jurisdiction in all questions involving Missouri State Medical Association membership, all controversies arising under the Constitution and Bylaws and under the rules of conduct as outlined in the Bylaws and controversies between two or more component societies or their members. The Judicial Council shall be the judicial authority of the Missouri State Medical Association and its decisions shall be final. The Judicial Council shall also investigate general ethical conditions and matters pertaining to the relations of physicians to one another or to the public and make recommendations to the House of Delegates or the component societies.

Section 2. The Judicial Council shall be composed of five members elected to five-year terms. Nominees shall be submitted by the President for election by the House of Delegates. Any vacancy occurring on the Judicial Council shall be filled by nomination of the President and election by the House at its next Convention for the remainder of the unexpired term. The first five members of the Judicial Council shall be elected on a staggered basis; one for one year; one for two years; one for three years; one for four years; one for five years.

Section 3. The Judicial Council shall select a Chairman and Vice Chairman and it may adopt such rules and regulations as it deems necessary and appropriate for the conduct of its affairs subject to approval by the MSMA Council."

The Association's judicial mechanism is intended to make available a means whereby differences and disagreements in the areas of membership and ethical and professional conduct can be brought to a settlement that is fair to the interests of all parties.

The original jurisdiction concerning complaints rests with the Judicial or Ethics Committee of the component medical society in which the doctor or doctors involved hold membership. The Missouri State Medical Association Judicial Council shall have original jurisdiction in all controversies or questions between two or more component societies or their members. Appeals from the findings of the component society committees may be taken to the MSMA Judicial Council. Beyond the Judicial Council of the MSMA, appeals may be taken by American Medical Association members to the Judicial Council of the American Medical Association.

The House of Delegates of the Missouri State Medical Association is the legislative body, and the Council and the Officers constitute the executive body of the Association. The Judicial Council has the plenary responsibility for the supervision and maintenance of the judicial mechanism.

This mechanism is intended to demonstrate that medicine can equitably and amicably settle its own problems in the area of ethical and professional conduct.

The Missouri State Medical Association Judicial Council has the authority to summon members of component societies to appear and testify either in connection with the complaint involving the members summoned or as a witness in cases involving other members. Failure to honor such a summons shall give rise to the citation of the member for contempt of the mechanism, which shall subject him/her to the disciplinary action of the Judicial Council.

All decisions of the MSMA Judicial Council are binding upon the respective members of the MSMA. They are not offered to members merely as advice. No member is free to decide whether or not he will conform to them. In addition, the MSMA Judicial Council may, in their judgement, notify hospital medical staffs and other appropriate agencies, as indicated, of their findings and determinations.

REGULATIONS

A. No complaint shall be given official consideration unless it is submitted in writing and presented in full with all the necessary details.

B. Receipt of the complaint in proper form shall be acknowledged to the complainant or complainants in writing.

C. The member or members of the component medical society against whom the complaint is lodged shall be informed in writing and shall be supplied with a copy thereof.

D. The possibility of an amicable settlement of the differences by means of individual contact with the parties to the complaint shall be explored by a designated member or members of the Judicial Council before the complaint is officially presented to the full Judicial Council for action.

E. When an amicable settlement, as mentioned above, is not possible, and when assurance has been given by the complainant (s) that no legal judgement has been rendered and that no court action is in the process or contemplated, the Judicial Council shall accept the complaint.

F. A hearing shall be scheduled by the Judicial Council to which physician members are summoned and non-members are invited. Any member of the Judicial Council who is a party to, or who has an interest in, the complaint shall, at this point, disqualify himself/herself from participation. Parties to the complaint will be interviewed separately and interrogated in the course of the hearing. They may be represented at the hearing by legal or other counsel. All evidence and testimony presented at the hearing and all discussion by the Judicial Council shall be confidential under the judicial mechanism. No discussion of the complaint shall be indulged in by any member of the Judicial Council except in the hearing dealing with the complaint or in the executive session following the hearing or in fulfillment of the area of official investigation.

G. Subsequent to the hearing and departure of the parties to the complaint, all findings of the Judicial Council shall be arrived at in executive session.

H. All principals shall be simultaneously informed of the Council's findings. This notification is to be forwarded by registered or certified mail.

Donald McIntosh, *Chairman*
Ronald A. Youmans
Hugh E. Stephenson, Jr.
E. T. Hansbrough
Richard V. Bradley

Are You Up for an Adventure?

INTRAV and **MSMA** offer you the chance to see the world!

Take advantage of the traveling medical seminars offered by **INTRAV.** Offered to all Members, Families and Friends of the Missouri State Medical Association. See incredible sights and gain valuable medical information at the same time while traveling by boat, plane or train throughout the world!

Trips available:

Orient Express Adventure—July 7-19, 1989
Wind Spirit - Italy/Adriatic Air/Sea Cruise — July 12-24, 1989
Danube River Adventure — July 23 - August 4, 1989
Wings Over the Nile — October 27 - November 9, 1989

For more information, write:
Missouri State Medical Association
ATTN: Mary Wiegers
P.O. Box 1028
Jefferson City, MO 65102
Or phone: 314/636-5151

Don't miss out — Call today!

Registration of the 131st Annual Convention

First Councilor District — 27

Andres, Edward, St. Joseph
Bare, Edward, Tarkio
Breckenridge, Robert, Kansas City
Burroughs, Nathan, North Kansas City
Dixon, John R., Brookfield
Dyer, Gary, St. Joseph
Fakhoury, Donald A., Kansas City
Gondring, William, St. Joseph
Grant, William, St. Joseph
Greenlaw, Cal W., Chillicothe
Hagan, John C., III, North Kansas City
Kobberman, Thomas W., Liberty
Kuenzi, Donald, Kansas City
Martin, John, St. Joseph
McCray, Stephen A., Gladstone
McKnight, Scott J., North Kansas City
Moranville, B.A., St. Joseph
Nguyen, Helen, St. Joseph
Patel, Prakash, St. Joseph
Schaaf, Robert, Gower
Siegel, Charles, Parkville
Silliman, York E., St. Joseph
Sportsman, Weldon, Kansas City
Thompson, Fred, Liberty
Vilmer, Stephen, Kansas City
Walsh, Rich., St. Joseph
Youssef, Redwan, Chillicothe

Second Councilor District — 12

Barnett, Floyd, Paris
Bukstein, Michael, Hannibal
Campbell, James, Macon
Cohrs, C.C., Moberly
Fleming, J. Will, Moberly
Florendo, Purification, Hannibal
Hall, Stanley G., Hannibal
Kruse, Carl, Palmyra
Palmer, Russell H., Palmyra
Plowman, Edward, Hannibal
Stuerman, L.G., Louisiana
Tompson, Robert, Moberly

Third Councilor District — 259

Abbott, David, St. Louis
Ahadi, Abd U., St. Louis
Albert, Renee, Overland
Anglo, Luis B., St. Louis
Anstey, John T., St. Louis
Avins, Larry St. Louis
Backer, Matt, St. Louis
Balster, Vernon H., St. Louis
Banez, Colita R., St. Louis
Banton, M. Roman, St. Louis
Banton, William C., II, St. Louis
Bart, Gerald, St. Louis
Bauer, John D., St. Louis
Bauschard, Fred, St. Louis
Bashiti, M., St. Louis
Baula, A. G., St. Louis
Beckette, Edmund S., St. Louis
Behrens, Donald T., St. Louis
Bhattacharyn, Arjun, St. Louis
Biddy, Ralph L., St. Louis
Blair, Olga, St. Louis
Block, Arnold, St. Louis
Blythe, James, St. Louis
Bohigian, George M., St. Louis
Bolinske, Robert, St. Louis
Brady, Harry, St. Louis
Brody, Arnold G., St. Louis
Brown, Seymour, St. Louis
Bruns, Kenneth, St. Louis
Buettner, John, St. Louis
Burkhart, Edward, St. Louis
Burstein Robert, St. Louis
Byrum, Fritz, St. Louis
Cabbabe, Edmond B., St. Louis
Caciolo, Carlo P., St. Louis
Campbell, J. William, St. Louis
Caronongan, C.M., St. Louis
Case, Mary, St. Louis
Casey, Arthur L., St. Louis
Catanzaro, Frank J., St. Louis
Chehval, M.J., St. Louis
Chirino, Octavio R., St. Louis
Chiu, Tai Mao, St. Louis
Coates, James G., St. Louis
Cohen, Bruce, St. Louis
Cole, Harry O., St. Louis
Cooper, T. J., St. Louis
Coronado, Mario A., St. Louis
Costello, Joseph, Chesterfield
Crandall, Richard E., Manchester
Craver, Jeffrey L., St. Louis
Criscione, James, Jr., St. Louis
Dagartzikas, A. K., St. Louis
Dalton, Arthur R., St. Louis
Danis, Richard K., St. Louis
Dankner, Rand E., St. Louis
Davidson, Raymond P., St. Louis
Debnam, James W., Chesterfield
Deeths, Tony, St. Louis
Dehner, Jonathan D., St. Louis
Deitchman, Robert B., St. Louis
DeSilva, Ananda, Florissant
Devineni, V. Rao, St. Louis
Dickler, Donald, St. Louis
Diemer, Peter A., St. Louis
Dilworth, Jacquelyn, St. Louis
Dorton, Robert K., St. Louis
Drescher, E. B., St. Louis
Edwards, James E., St. Louis
Eidelman, Jack R., Clayton
Ettelson, Charles D., Chesterfield
Evens, Ronald G., St. Louis
Fabito, Daniel, St. Louis
Fisher, Linda A., St. Louis
Flores, J., St. Louis
Floro, Mariano N., St. Louis
Friedman, Paul L., St. Louis
Friedman, Wm., St. Louis
Furla, August, St. Louis
Gagliardo, Joseph, St. Louis
Galakatos, Andrew E., St. Louis
Gale, Arthur H., St. Louis
Gans, Lawrence, St. Louis
Gavini, R. R., St. Louis
Gearhart, David L., Creve Coeur
Gedney, William B., St. Louis
Geise, August, St. Louis
Gerowin, Lance, St. Louis
Ghosh, Nellie N., St. Louis
Gimpelson, John H., St. Louis
Gladney, John H., St. Louis
Goldman, Gordon M., St. Louis
Gonzalez, Alicia D., St. Louis
Graviss, E. Richard, St. Louis
Gregory, John, St. Louis
Haddock, James N., Webster Groves
Halverson, John D., St. Louis
Harell, Alex, St. Louis
Hatfalvi, Bela I., St. Louis
Hawkins, George, St. Louis
Heller, R. L., St. Louis
Herzog, Godofredo, St. Louis
Herzog, Jacques, St. Louis
Hironimus, John, St. Louis
Hogan, P. C., St. Louis
Huffaker, Wm., St. Louis
Hughes, Robert G., St. Louis
Hummel, Wm., St. Louis
Hurley, Joseph, Creve Coeur
Ishida, Yasuo, St. Louis
Jacob, Karl, St. Louis
Jotte, Richard F., Frontenac
Johnson, Charles J., St. Louis
Kamenetzky, Stephen A., St. Louis
Kappesser, N. B., St. Louis
Kappesser, R. C., St. Louis
Karsh, Robert S., St. Louis
Kayes, Jack, St. Louis
Kitchen, Alice D., St. Louis
Knopf, Harry L. S., St. Louis
Knowles, R. Raymond, St. Louis
Kolker, Allan E., St. Louis
Kopp, Shelby, St. Louis
Kowert, Edward H., St. Louis
Kraybill, W., St. Louis
Krettek, John E., St. Louis
Krieger, John L., St. Louis
Kuhn, Lawrence, St. Louis
Laird, John M., St. Louis
Lauber, Joseph J., St. Louis
L'Ecuyer, Jerome L., St. Louis
Leightner, William, St. Louis
Levine, Laurence A., St. Louis
Lewis, J. Eugene, St. Louis
Liao, Kun T., St. Louis
Lieb, Francis X., St. Louis
Logie, M. B., St. Louis
Lottes, J. Otto, St. Louis
Lund, Robert, St. Louis
MacDonald, Robert R., Jr., St. Louis
Machek, Otakar, St. Louis
Magaletta, George, St. Louis
Maloney, Robert M., St. Louis
Manasala, Antonio, St. Louis
Manion, Maria E., St. Louis
Marchosky, J. A., Chesterfield
Martin, David S., Chesterfield
McCadden, Michael E., St. Louis
McGraw, Daniel J., St. Louis
Medler, P. Louis, St. Louis
Mehra, Ravinder, St. Louis
Mehra, Usha, St. Louis
Mell, Roger L., St. Louis
Melson, G. Leland, St. Louis
Meyer, Jay, St. Louis
Meyer, Melvin E., St. Louis
Middleton, Jerry M., St. Louis
Miller, Charles, St. Louis
Miller, Robert N., St. Louis
Miskovsky, Emil, St. Louis
Montes, Arturo, Florissant
Moran, Christpoher, St. Louis
Moritz, Gerald W., St. Louis
Mullarky, W. A., Lake Mary, Fl.
Murdock, Nathaniel H., St. Louis
Murphy, Daniel J., St. Louis
Newport, Gerald, St. Louis
Niedermeyer, George, St. Louis
O'Brien, Edward, St. Louis
O'Sullivan, Daniel F., St. Louis
Owens, William D., St. Louis
Paez, Mauro A., St. Louis
Paletta, Christian, Webster Groves
Paletta, F. X., Sr., St. Louis
Pappalardo, Carlos, St. Louis
Pardo, Leopoldo P., St. Louis
Parra, Raul O., St. Louis

Payne, Meredith J., St. Louis
Perkins, David E., St. Louis
Peterson, Fred, St. Louis
Petruska, Paul J., St. Louis
Pohl, David L., St. Louis
Pruett, Buchard S., St. Louis
Purcell, John, St. Louis
Quick, Richard T., St. Louis
Rahman, R. Moududur, St. Louis
Ramsey, Robert H., St. Louis
Randolph, Bernard C., St. Louis
Reardon, Thomas F., Kirkwood
Redington, James C., Jr., St. Louis
Reisler, David M., St. Louis
Rennard, Marvin, St. Louis
Reh, Thomas, St. Louis
Reynolds, Susan K., St. Louis
Richards, Frank O., St. Louis
Ring, Edward M., St. Louis
Ring, Lisa, Bridgeton
Ritter, Hubert A., St. Louis
Rizzo, Adolfo E., St. Louis
Robert, Rainey, St. Louis
Roberts, John P., St. Louis
Rosenblum, Barry N., St. Louis
Roy, Tapan, St. Louis
Ryall, Jo-Ellyn M., St. Louis
Saha, Sudah, St. Louis
Santillano, A. B., St. Louis
Sasser, W. F., St. Louis
Schlafly, Bruce, St. Louis
Schmidt, Dennis A., St. Louis
Schuessler, W. P., St. Louis
Schwartz, Melvin M., St. Louis
Sessions, Donald, St. Louis
Shaw, Edward J., St. Louis
Shehadi, Sameer, St. Louis
Shen, Winston, St. Louis
Shively, Raymond E., St. Louis
Sicard, Gregorio A., St. Louis
Simon, David L., St. Louis
Smith, Kenneth R., Jr., St. Louis
Smith, Peter G., St. Louis
Spalding, Donald, St. Louis
Srisuro, C., St. Louis
Steinberg, Franz U., St. Louis
Stohr, Paul, St. Louis
Sullivan, Clement, St. Louis
Taylor, Eugene, St. Louis
Thomas, J. Regan, St. Louis
Tichenor, Robert W., St. Louis
Thiel, J. Allen, St. Louis
Tucker, Dolores R., St. Louis
Turner, Timothy, St. Louis
Tuteur, Peter G., St. Louis
Valach, Frank J., Creve Coeur
Vannier, Michael W., St. Louis
Velasco, Ernest T., St. Louis
Venable, H. Philip, Ballwin
Verde, Julian N., St. Louis
Villamar, Elizabeth N., St. Louis
Vitale, Stephen J., Chesterfield
Wacker, Leo L., St. Louis
Walker, Harvey, Jr., St. Louis
Walz, Bruce J., St. Louis
Webber, William B., St. Louis
Wee, George C., Ballwin
West, Joseph W., St. louis
Westerman, Robert N., St. Louis
Wexler, Stephen A., St. Louis
White, Newton B., St. Louis
Whitener, Miles C., St. Louis
Whittico, James M., St. Louis
Wice, Martin, St. Louis
Wilkinson, David, St.Louis
Williams, Carol F., St. Louis
Willis, H. Robert, St. Louis
Wittler, Harry A., St. Louis
Wissner, Seth, St. Louis
yasin, Fazle M., St. Louis
Yazdi, Tom, Town & Country
Ziegler, Robert E., Webster Groves
Zylka, J. Michael, St. Louis

Fourth Councilor District —16

Cannon, Richard, St. Charles
Clever, Victor G., St. Charles
Conoyer, J. Michael, St. Peters
Copeland, Jeffrey G., St. Charles
Curry, Michael J., St. Charles
Damron, E. O., Elsberry
DelPizzo, Ferd, St. Charles
Farrell, Sam, Washington
James, Kathleen, St. Charles
Lentz, Kathy, Washington
Marchiando, Albert, Washington
Marrs, Brad, St. Charles
Richardson, Wm. R., Union
Short, Howard N., Washington
Willman, Martin L., St. Charles
Workman, George, Hermann

Fifth Councilor District — 68

Ailor, Ed, Columbia
Allen, William C., Columbia
Anderson, Philip C., Columbia
Anderson, Thomas R., Columbia
Barbee, Charles, Columbia
Braun, Alan, Jefferson City
Brukardt, Diane, Columbia
Buescher, Lucinda, Columbia
Bunge, Nancy, Mexico
Clark, David P., Columbia
Cooper, Charles, Jefferson City
Corrado, Joseph, Mexico
Cunningham, Milamari, Columbia
Critchlow, Tom, Mexico
Curtis, Jack, Columbia
Daly, James W., Columbia
Davis, William E., Columbia
Davisson, W. F., Jefferson City
DeSpain, John, Denver, Co.
Devkota, Jagadishwar, Columbia
Doerhoff, Carl, Jefferson City
Eggers, G. W. N., Jr., Columbia
Foote, Jerry, Columbia
Fotopoulos, Chris, Osage Beach
Francis, Roger, Osage Beach
Fuchs, George J., Columbia
Griffin, William, Columbia
Gunn, Victoria, Jefferson City
Hardin, David B., Columbia
Harmon, Robert G., Jefferson City
Harrison, Winston, Columbia
Hayden, M. R. (Pete), Camdenton
Heimburger, Richard, Columbia
Henry, Lawrence D., Jefferson City
Hof, Jem, Columbia
Hoxworth, Gerald M., Mexico
Husain, Arshad, Columbia
Jackson, Vernon B., Fulton
Kanagawa, H., Jefferson City
Kauffman, Ruth, Versailles
Kennett, Jerry, Columbia
Laramore, Rosemary, Columbia
Lueckenhoff, Rebecca, Jefferson City
Michael, Roy, Jefferson City
Murrell, Jerry, Columbia
Nichols, Kirt, Columbia
Nierling, Dean A., Columbia
Pelegrin, Robert, Osage Beach
Perry, Michael C., Columbia
Phillips, Stephen, Columbia
Pickard, C. M., Columbia
Rall, Ken, Columbia
Rodgers, Dorothy, Columbia
Roller, James, Columbia
Ross, Gilbert, Columbia
Schokker, J., Jefferson City
Scokin, Daniel, Columbia
Shah, Jayendra, Columbia
Silver, Donald, Columbia
Stephenson, Hugh E., Jr., Columbia
Tanner, R. H., Jefferson City
Taylor, Steve, Mexico
Thomas, Robert M., Columbia
Wankum, Robert, Jefferson City
Watson, Trevor, Columbia
Weiss, James M., Columbia
Werth, Joe, Jefferson City
Witten, David M., Columbia

Sixth Councilor District — 16

Bever, Grant, Lee's Summit
Campbell, A. J., Sedalia
Haynie, William W., Butler
Hornbostel, Phillip M., Sedalia
King, Richard H., Clinton
LaHue, W. C., Lexington
Lee, Gerald, Kansas City
Lovinger, Warren, Jr., Nevada
Magee, Robert L., Eldorado Springs
Meyer, Jerry, Concordia
Moore, Candice A., Nevada
Moore, M. Ted, Nevada
Pavlu, Robert, Waverly
Raynor, R., Marshall
Roehrs, Marvin E., Marshall
Turner, William, Nevada

Seventh Councilor District — 55

Allebach, Hobert, Leawood, KS
Ashby, Jennifer, Kansas City
Ashcraft, Keith, Kansas City
Bauman, Alan, Kansas City
Bogart, Douglas B., Kansas City
Bradshaw, William D., Kansas City
Buchanan, Barbara, Kansas City
Buie, Steven E., Kansas City
Calovich, Emery R., Shawnee Mission, KS
Case, William F., Kansas City
Cordell, Larry O., Kansas City
DeFeo, Frederick G., Kansas City
Dorzab, William E., Kansas City
Gibbons, Robert, Jr., Overland Park, KS
Gordon, Stephen M., Kansas City
Hahn, Fred, Kansas City
Hall, John C., Kansas City
Hardy, John, Kansas City
Hausheer, Herman J., Independence
Hoech, George P., Jr., Kansas City
Hollinger, Lloyd A., Prairie Village, KS
Inciardi, Marc, Leawood, KS
Keitges, Pierre W., Kansas City
Johnson, Dallas A., Kansas City
Krebs, Festus J., III, Kansas City
Lee, King Y., Kansas City
Lockwood, Ted E., Kansas City
Loren, Michael, Independence
Matson, Jeffrey A., Kansas City
Michelson, Richard B., Kansas City
Mitchell, John D., Kansas City
O'Malley, James, Leawood, KS
Piebenga, Larry, Kansas City
Postma, George S., Shawnee Mission, KS
Potts, Donald A., Kansas City

Prather, Charlene, Kansas City
Reister, Dorothy, Kansas City
Roberts, Fred, Kansas City
Rues, Larry A., Kansas City
Sanders, Donald C., Kansas City
Santoro, Carlos G., Kansas City
Sauer, G. C., Kansas City
Siegel, Carl D., Kansas City
Sirridge, Marjorie S., Kansas City
Stacey, Wallace, Independence
Strauss, Carl, Kansas City
Susman, Lisa A., Kansas City
Taormina, Marc K., Independence
Tuohy, G. F., Kansas City
Waldorf, James, Leawood, KS
Weaver, Michael L., Kansas City
Whittaker, C. Keith, Kansas City
Yedlin, Jay H., Kansas City
Youll, Donald, Kansas City
Zukaitis, Mark G., Kansas City

Eighth Councilor District — 61

Ameduri, Clifford J., Springfield
Anderson, Paul B., Neosho
Bagby, Jack, Springfield
Benson, Ronald G., Springfield
Betz, Richard, Springfield
Betz, Robert, Springfield
Brian, William J., Springfield
Brigden, Robert B., Neosho
Campbell, Daniel C., Mt. Vernon
Chapman, Ramona M., Joplin
Christy, Raymond, Springfield
Clarke, Michael S., Springfield
Crosby, W. H., Joplin
Curry, Stephan, Springfield
Duff, James, Springfield
Ferguson, John P., Springfield
Gentry, Michael, Springfield
Grim, Edward, Joplin
Hall, David W., Springfield
Hardman, Wm., Springfield
Harvey, Judy, Springfield
Hellam, Duane, Springfield
Hilton, Paul E., Joplin
Huewe, Doug, Springfield
Ivy, H. B., Springfield
Kelling, Collyer, Springfield
Key, James S., Springfield
Knowlton, Norman, III, Springfield
LaFerriere, Keith, Springfield
Lorenc, Ernest, Springfield
Lurie, Harold, Springfield
Macdonnell, T. M., Marshfield
Mangalat, N., Joplin
Martin, Clarence, Joplin
McCorcle, Marc, Springfield
Menchetti, Don, Springfield
Miles, Wayne, Springfield
Mohsen, Aly, Springfield
Molchan, James L., Bolivar
Pearman, Carl C., Springfield
Peterson, Stanley, Springfield
Pryor, I. Joe, Joplin
Raborar, Arteso, Springfield
Roberts, Howard, Joplin
Rogers, James T., Springfield
Sherrod, Duane, Joplin
Shields, Larry, Springfield
Singleton, Marvin, Joplin
Snow, Jon, Springfield
Spade, Diana J., Springfield
Sullivan, Dan, Springfield
Vale, Janie, Springfield
Vinyard, Jack, Joplin
Walker, William M., Rogersville
Wall, Norman, Springfield
Whitlock C. C., Springfield
Willcoxon, Robert, Joplin
Wilson, Roy E., Springfield
Winsky, Arlen, Springfield
Wolfe, James, Springfield
Zahn, Robert, Springfield

Ninth Councilor District — 12

Barbe, David, Mountain Grove
Bass, Barry J., Rolla
Bass, James J., Rolla
Esparrago, F. R., Monett
Hasek, James, Mountain Grove
Isaac, Anita M., Ash Grove
Matthews, Richard H., Rolla
Paskon, Seth, Salem
Smith, C. F., Willow Springs
Stoecker, Wm. V., Rolla
Stubbs, Thomas, West Plains
Vandewalker, Mark L. Waynesville

Tenth Councilor District — 37

Auner, J. David, Ironton
Blank, Michael, DeSoto
Bowers, Gregory, Sikeston
Chastain, Charles, Flat River
Clark, David J., Cape Girardeau
Crist, Charles L., Cape Girardeau
Dempsey, Ken J., Sikeston
Eckstein, Tim E., Ste. Genevieve
Eller, Gordon W., Cape Girardeau
Engelhardt, Robert C., Poplar Bluff
Glenn, Theodore J., Cape Girardea
Griffin, Darrell, Farmington
Gujarati, Subhash, Poplar Bluff
Hansbrough, E. T., Poplar Bluff
Hill, Ronald, Dexter
Huckstep, Robert, Farmington
Jones, Stanley G., Sikeston
Jung, Chris, Cape Girardeau
Jung, J. Marshall, Cape Girardeau
Junker, James A., St. Louis
Kasten, Mark C., Cape Girardeau
Kim, Yong Kie, Cape Girardeau
Levenson, Ina, Poplar Bluff
Masters, Edwin J., Cape Girardeau
McDonald, E. F., Jackson
Miller, William D., Dexter
Pontillas, Job, Perryville
Ritter, Carl F., Cape Girardeau
Roberts, Perry T., Cape Girardeau
Robinson, Nicholas, Kennett
Seabaugh, Wm. O. L., Cape Girardeau
Shaplin, Alfred D., St. Louis
Shell, William, Sikeston
Sparkman, Thomas C., Cape Girardeau
Spitler, Allen L., Cape Girardeau
Turner, Kirby, Poplar Bluff
Whitten, J. S., Cape Girardeau

St. Louis University Student Medical Society — 4

Saunders, Evan, St. Louis
Bigler, Lane, Webster Groves
Cunningham, Mark, Clayton
Martin, Tim, St. Louis

University of Missouri-Columbia Student Medical Society — 6

Mills, Lora A., Columbia
Meyer, Joseph V., Columbia
Elliott, James, Columbia
Slaughter, Larry, Columbia
Thessen, Christopher, Columbia
Stephenson, Maureen, Columbia

University of Missouri-Kansas City Student Medical Society — 4

Dana S. Bacon, Kansas City
Laura Carlson, Kansas City, KS
Nasreen Syed, Kansas City
Carla Siegfried, Mission, KS

Guest Physicians —

Ailor, Susan K., Columbia
Anderson, Dale J., St. Louis
Arnold, Donald E., St. Louis
Barrett, David M., Rochester, MN
Bailey, Hugh R., Kansas City
Becknell, Charlie A., Kansas City, KS
Beechwood, E. C., Villa Ridge
Billinoton, Linda R., St. Louis
Blanchard, Elizabeth, Kansas City
Bosche, Alfred, St. Louis
Boyd, Craig, Florissant
Brody, Garry S., Downey, CA
Brown, George F., Glendale, AZ
Bruce, Mark, Webster Groves
Burkman, Kip A., Omaha, NE
Busch, A. K., Belleville, IL
Buzzell, Robert A., Columbia
Byrne, David A., Bloomington, IN
Campbell, E., St. Louis
Cox, Susan K., Flat River
deCastro, Fernando J., St. Louis
Destouet, Judy, St. Louis
DesRosario, A. L., St. Louis
Dhingra, Ashok K., St. Louis
Driskell, Karen, Kansas City, KS
Ehlert, Tamara, St. Louis
Estrada, Corazon, St. Louis
Gabel, Michael G., St. Louis
Gallardo, O. E., St. Louis
Grannemann, H. Neal, Rolla
Griffith, John K., Arnold
Griffin, Roberta, Columbia
Halberstaat, Cathi, Kansas City
Hamtil, L. W., Overland Park, KS
Harrison, Elizabeth, Sacramento, CA
Hazelrigg, Don, Evansville, IN
Heidbrier, Edward W., St. Louis
Hopper, John M., Baton Rouge, LA
Johnson, Brian, Columbia
Kalenab, Jeffrey, St. Louis
Kane, Nancy, St. Louis
Kang, C. H., St. Louis
Kestenbaum, Thelda, Kansas City, KS
Khan, Khawla, St. Louis
Kopperman, Mordy, Kansas City
Lichtenfeld, Mark, St. Louis
Liu, Haitong, St. Louis
Lovinger, Warren, Sr., Stover
Markivee, C. R., St. Louis
Martin, Darnell L., Columbia
Martin, Lester, Cincinnati, OH
McCarthy, Teri, St. Louis
Nagorsky, Nancy, St. Louis
Nalley, Maryann R., Jefferson City

Newmark, Leonard, Town & Country
Ostrow, David G., Ann Arbor, MI
Oza, Rayen P., St. Louis
Powell, Barbara, Rolla
Rada, Dave, Kansas City
Radley, Anne P., St. Louis
Reece, Richard, Minneapolis, MN
Remmler, Dan, Kansas City
Ring, John J., Mundelein, IL
Robinson, Richard C., Overland Park, KS
Roch, John, Baltimore, MD
Rojanasathit, Chind, St. Louis
Rosario, A. Del, St. Louis
Santa Cruz, Daniel, St. Louis
Santos, Dom S., Farmington
Shah, Saroj, Columbia
Singleton, Mitch, Fayetteville, AR
Sigler, Brent, Kansas City, KS
Stephens, James T., Oberlin, OH
Stephens, Jeanne H., Oberlin, OH
Storms, Bruce L., Chickasha, OK
Suri, Jagdish C., Clayton
Suri, Vinod, Clayton
Sirridge, William T., Kansas City
Sunwoo, InSook, St. Louis
Taulbee, Kent, Bloomington, IL
Terezakis, Nia, New Orleans, LA
Thibodeaux, David C., Marietta
Triplett, Douglas, Muncie, IN
Uhr, Barry W., Dallas, TX
Ulett, George, St. Louis
Wasserman, Abbu, Memphis, TN
Wilson, Keith M., Clayton
Written, B., St. Louis
Young, Lee, Clayton

There were 574 members, 89 guest physicians, 100 guests, 94 MSMA Auxiliary members, 130 exhibitors and 20 staff members present. Total registration was 1007.

Summary of Council Minutes 1988-89

Meeting of March 20, 1988
Hyatt Regency, Kansas City

Gary Dyer, St. Joseph, was elected chairman of the Council and became the presiding officer.

Dorothy Reister, Shawnee Mission, Kan., was elected vice chairman. Norman Knowlton, III, Springfield, was elected secretary, and Harry O. Cole of St. Louis was elected treasurer.

The Council directed the Executive Committee to seek action through the AMA against the newest "medically unnecessary" Medicare patient letters. Councilors emphasized the need for immediate action.

The report of the Building Committee, including its recommendations on selection of renovation plans, was accepted.

Meeting of May 21, 1988
Inn at the Grand Glaize, Osage Beach

Councilors approved the Kansas City Crown Center Hotel as the site for the 1991 annual convention. Dates for the meetings in 1991 and 1993 were also approved.

Workshops to help members deal with third-party payers and other issues were approved.

Approval was also given to a proposed definition of the practice of medicine, put forward by the Board of Healing Arts.

After hearing discussion about the MedAssist petition drive, the Council voted to send an informational cover letter and a copy of the petition to each MSMA member. Additional financial support for the proposal and the petition drive was not given, pending study.

The report of the Executive Committee contained several recommendations. The Council approved them as follows:

Suspended action on the Quindaro landfill issue until further correspondence and information are received.

Accepted recommended actions on MOMEDICO proxy statement items.

Approved encouraging MSMA members to contribute to the American Cancer Society's Smoke Free Class of 2000 program, but did not suggest an official Association position.

Voted to continue efforts to eliminate the "medically unnecessary" provisions under Medicare, with letters to Dr. Roper and Medicare intermediaries.

Following a report from the Legislative Affairs Committee, the Council approved the formation of a committee to meet with representatives of the pharmacists' association on issues between the two organizations.

A report from the Missouri PRO highlighted the continuing need for voluntary reviewers. The Council endorsed the voluntary effort for the two-month period from June through September.

The new medical director for the Physicians' Rehabilitation Program, Jack Croughan, gave a report from the revamped program. The Council approved a name change for the program, to be known as the Missouri Physician Health Program. Dr. Croughan also recommended that the program drop its primary treatment function, thus eliminating the conflict inherent in being both a treatment and monitoring entity. The Council accepted his recommendation, as well as the quarterly report from the program.

Councilors heard a report from the AMA delegation, and voiced its official support for having a Missourian on the AMPAC Board, and directed that nominees be forwarded to the AMA.

Actions on resolutions from the 130th annual convention were distributed and approved.

Meeting of August 27, 1988
Capitol Plaza Hotel, Jefferson City

A report was presented from the Legislative Affairs Committee. Its report was accepted by the Council, including recommendations on various resolutions that had been referred to the Committee.

Dr. Croughan reported from the Physicians' Rehabilitation Program. After discussion, the Council took the new policy and procedure manual under study, and referred to the Executive Committee the question of offering the program's services to nonmembers. The Budget and Finance Committee was charged with investigating the matter of collecting past due accounts, and several revisions in the "Statement of Relapse" were taken up for further study.

A restructuring of MOMEDICO into a holding company, MOMED, was discussed. The Council voted to transfer currently held MOMEDICO stock for stock in the new holding company. A subordinating debenture was renewed, as well.

Workshops dealing with Medicare issues were reported to be a success, and the Council approved holding further workshops of this type.

The body also formally recognized the establishment of the Missouri Society of Plastic and Reconstructive Surgery, represented on the Interspecialty Commission by Richard Heimburger.

The Council elected, by written ballot, Robert R. MacDonald, Jr., St. Louis, to fill the position of delegate to the AMA that was vacated by Frank Lieb.

Jo-Ellyn Ryall, St. Louis, was then appointed to replace

Dr. MacDonald as an alternate delegate.

After hearing a comment regarding an MSMA endorsed pension plan, the Council voted to form a task force to study all member benefits.

William Bradshaw, who resigned July 30 from the directorship of the Missouri Patient Care Review Foundation, was commended by the Council for his service to the Foundation.

A report from the Building Committee recommended the hiring of B.D. Simon Construction Co., Columbia, as contractor for the remodeling and renovation of MSMA Headquarters. The Council approved this recommendation.

Results from the Medicaid survey commissioned by the Association were presented with recommendations for action. The Council accepted the report and adopted the action plan.

Lengthy discussion followed the report from the Task Force on the Voluntary Acceptance of Medicare (VIP) project. On a written ballot, the Council instructed the task force to finalize the project. The final report was then to be sent to the Council with a mail-in vote. Vice Councilors would also receive copies of the final report.

The expenditure of funds to support the MedAssist petition drive, tabled at the previous meeting, was finally turned down on a written ballot.

The Council recommended the reappointment of Fred Peterson, and the new appointment of Jerry Murrell, to the Board of the Missouri Patient Care Review Foundation.

Meeting of December 10, 1988
Capitol Plaza Hotel, Jefferson City

The Council observed a moment of silence in memory of Immediate Past President Larry G. Piepergerdes.

Dr. Croughan presented a report from the Physician Health Program. Following his report, the Council approved the Policy and Procedure Manual, with correction of typographical errors. They further approved the proposal that the PHP's services be restricted to use by members only, with a mechanism to facilitate the processing of "hardship" cases without breaching confidentiality.

On the question of uncollected fees, the Council asked the Committee to attempt once again to collect the fees before finally writing them off. The revised statement of relapse was approved.

The appointment of Vernon Leroy Young, St. Louis, to the Editorial Board was approved.

After discussion of a public hearing, sponsored by the Missouri Board of Health, on the "smokeless cigarette," the Council went on record as opposed to this device. It then approved expenditure of $830 toward air fare for Patrick Reynolds, grandson of R. J. Reynolds and outspoken opponent of smoking.

The 1989 budget for the Association was presented by Dr. Cole and the Budget and Finance Committee. The budget was approved as presented, with a provision for evaluation of Physicians' Health Program budget in June or July.

A report from the Legislative Affairs Committee outlined several issues and bills that were expected to surface during the 1989 General Assembly. The Council accepted the report. After some discussion, the Council also directed the Committee to draw up a proactive "wish list" of legislative issues to be pursued, specific targets for funding, and a priority ranking of items. A preliminary report should be made available at the annual convention, with a more detailed report in June.

Following a report from the Missouri PRO, the Council reiterated its belief that communications between the PRO and physicians should be confidential, from physician-to-physician.

The Council accepted a report from the Building Committee, including expenditures on various portions of the renovation and restoration work.

Marvin Singleton was thanked for his years of service to the AMA delegation, from which he had recently resigned.

The candidacy of George Bohigian for a seat on the AMA Board of Trustees was given Council support, including financial pledge of up to $10,000. The necessary amendment to the budget was approved.

Meeting of January 28, 1989
Ramada Inn, Jefferson City

A report was presented by John Matthews of the Legislative Affairs Committee on bills before the 1989 General Assembly. The report, with recommendations, was accepted.

Dr. Cooper reported that the Association, in conjunction with the University of Missouri, will co-sponsor a memorial to Larry Piepergerdes. He also reported that Warren Lovinger, Nevada, will receive the MSMA Citizenship and Community Service Award. He reappointed Donald Sessions to the editorship of MISSOURI MEDICINE.

A committee was appointed to study mandated health insurance benefits. Drs. Knowlton, Braun, and Barbe will serve.

Dr. Cooper also noted a report from the Task Force on Membership Benefits, which will study and make recommendations on the benefits offered to MSMA members.

David Wilkinson reported from the Board of Healing Arts that the state Attorney General has advised the Board not to promulgate as a rule of definition of the practice of medicine.

The possibility of forming a PRO oversight committee was referred to the Executive Committee for study and report.

The Council agreed to send a letter of thanks to JoAnn Hodgman, who resigned recently from the Physicians' Health Program.

The Council also voted to submit three resolutions to the 1989 House of Delegates.

Following a report from Jerry Murrell of the Boone County Medical Society, the Council agreed to send a letter to the University of Missouri chancellor suggesting that the Dean of the MU Medical School and the University Hospital Administrator report to the same person in the University hierarchy.

Acting on a motion from Fifth District Councilor Dr. Murrell, the Council also approved the consolidation of Moniteau and Osage County Medical Societies into Cole County Medical Society, and the consolidation of Howard and Cooper County Medical Societies into Boone County Medical Society.

David Hall made a motion, which was duly carried, that

Dr. Robert Harmon, Director of the Department of Health, and Dr. Michael Reagen, Director of the Department of Social Services, be invited to MSMA Council meetings.

After hearing a report from the Physicians' Health Program, the Council approved the recommendation that program participants be assessed a monthly fee, and approved the study of a new non-profit corporation for PHP operations.

Meeting of April 12, 1989
Marriott Pavilion Hotel, St. Louis

The minutes of the January 28, 1989, meeting were approved as distributed.

Dr. Victoria Martin, Kansas City, Councilor for the Resident Physician Section, and Dr. Raymond Caffrey, Councilor, 7th District, have both resigned their positions as Councilor.

Mr. Royal O. Cooper, Executive Vice President, asked the Council for approval for the following people to execute proxies as listed: MSMI — Drs. Marvin Singleton and T. J. Cooper and Royal O. Cooper; MOMEDICO — Drs. T. J. Cooper, Marvin A. Singleton, J. Otto Lottes and Royal O. Cooper. On motion, duly seconded, the Council approved the above recommendations.

Mr. Cooper thanked the component society executives for their assistance with the recently held "Medicare Update" Workshops. Three more workshops were planned for May.

First quarter membership figures indicate that we are below budget expectations. Mr. Cooper stated that membership efforts would be enhanced following the Annual Meeting. He reported the building renovation is proceeding on schedule. He encouraged all the Councilors to urge their constituents to visit the exhibits.

President Cooper asked for Council approval for the retention of the current Publications Committee for 1989-90. On motion, duly seconded, the above recommendation was approved.

Dr. Cooper called attention to the Report of MSMA Executive Committee on Actions on Resolutions from the 130th MSMA Annual Convention. The report was accepted as presented.

Dr. Cooper also presented a report from the Task Force to Study Membership Benefits. The report was accepted as presented.

Mrs. Gary A. Dyer, MSMA Auxiliary President, distributed a report outlining her activities since the last Council meeting. She introduced Mrs. Charles Barbee, the incoming Auxiliary President.

Dr. Dyer introduced Dr. Paul Petruska, Vice Councilor for the Hospital Medical Staff Section.

Dr. Norman Knowlton presented a report, including a resolution opposing mandated benefits and encouraging the voluntary offering of certain preventive health benefits. On motion, duly seconded, the Council accepted the report and presentation of this resolution to the upcoming session of the House of Delegates.

On motion, duly seconded, the Council approved reaccreditation for continuing medical education for the following: Christian Hospital Northeast-Northwest for four years and St. Anthony's Medical Center for four years.

Dr. George Bohigian, AMA delegate, gave a brief report on AMA activities and his upcoming campaign for AMA Board of Trustees. The Council accepted this report.

Dr. David Wilkinson presented a report from the Conjoint Meeting of the Medical-Legal Committees of MSMA, Missouri Association of Osteopathic Physicians and Surgeons and Missouri Bar Association. The Council accepted this report.

Dr. Jack Croughan presented the quarterly report of the Physicians' Health Committee and then answered Councilors questions about the program. This report was accepted by the Council.

Dr. Marvin Singleton gave a brief PAC report. Dr. Williams expressed the Council's appreciation to Dr. Dyer for all of his efforts during the past year.

Dr. William Huffaker, 3rd District Councilor, moved to introduce as a Council resolution, a resolution from the 3rd District on "Regulation of Ordering Laboratory Studies and Diagnostic Test." On motion, duly seconded, the Council approved the introduction of this resolution. ■

Missouri State Medical Foundation

Friday, April 14, 1989
Marriott Pavilion Ballroom
St. Louis

Board of Trustees

The Annual Meeting of the MSMF Board of Trustees was called to order by Miles C. Whitener, M.D., president. The following slate of officers was nominated from the floor and elected by acclamation:

President — Miles C. Whitener, M.D., *St. Louis*
Vice President — Frederick W. Hahn, M.D., *St. Louis*
Secretary/treasurer — Robert H. Tanner, M.D., *Jefferson City*
Assistant Secretary — Susan Flanigan Gold, *MSMA staff*

The following physicians were elected to the MSMF Board of Trustees for five-year terms:

Donald Fakhoury, M.D., *Kansas City*
Linda Fisher, M.D., *St. Louis*
Robert H. Tanner, M.D., *Jefferson City*

The Foundation received contributions totalling $6294.00. No assessment was received from the Missouri State Medical Association in 1988. There being no old or new business, the meeting was adjourned.

MSMF Annual Meeting

The Annual Meeting of the Missouri State Medical Foundation was called to order by Miles C. Whitener, M.D., president. The minutes of the 1988 Annual Meeting were approved as published in the July 1988 issue of MISSOURI MEDICINE. For the 1988-89 academic year, the Foundation awarded $134,500 in loans.

Regarding old business, Michael G. Grimes from Prudential-Bache Securities, presented a new format for the MSMF annual direct-mail solicitation. Mr. Grimes explained the previous direct-mail format involving charitable lead trusts, supplemental retirement trusts, and charitable remainder trusts. He identified the following problems with that program: 1) It was difficult to present, understand and maintain each program without the help of expensive legal counsel; 2) the physician must expire before the Foundation receives any benefits; 3) due to the complications of each program, they were difficult to market.

Therefore, Mr. Grimes proposed a charitable giving program incorporating insurance annuities. The physician donates to the Foundation and receives a partial tax deduction for the year in which the donation is made. The Foundation purchases an insurance annuity with a percentage of the donated money so that the physician receives a guaranteed check at retirement. The majority of the donation is used for the MSMF medical student loan program. Many private colleges and universities market similar programs for their development campaigns, so Mr. Grimes presented different examples of how the MSMF program would work. He also contacted a St. Louis law firm to ensure that the MSMF could legally provide this program and found that the MSMF can provide such a service.

In addition, Mr. Grimes offered to purchase the $2500 in software necessary to interface with the Committee of Gift Giving in New York in order to operate the MSMF program. He also offered to coordinate the program, train the personnel and market it.

After discussion, the Board approved the program as described by Mr. Grimes. The Board then approved calling the program the Invest in Missouri Program. Next, the Board approved a $5,000 minimum investment for the program.

Next under old business, the interest rate of the MSMF loans was discussed. Currently, recipients are charged 4% simple interest while in medical school and 10% simple interest while in residency and during the repayment period. Financial aid officers from Missouri's medical schools expressed concern over the MSMF loan program rate of interest at the 1988 meeting. A written proposal for a 0% loan program was also reviewed. The Board decided to table a change in the current MSMF interest rate until the 1990 MSMF meeting in order to evaluate how the Invest in Missouri Program may affect the loan program.

The meeting was then adjourned.

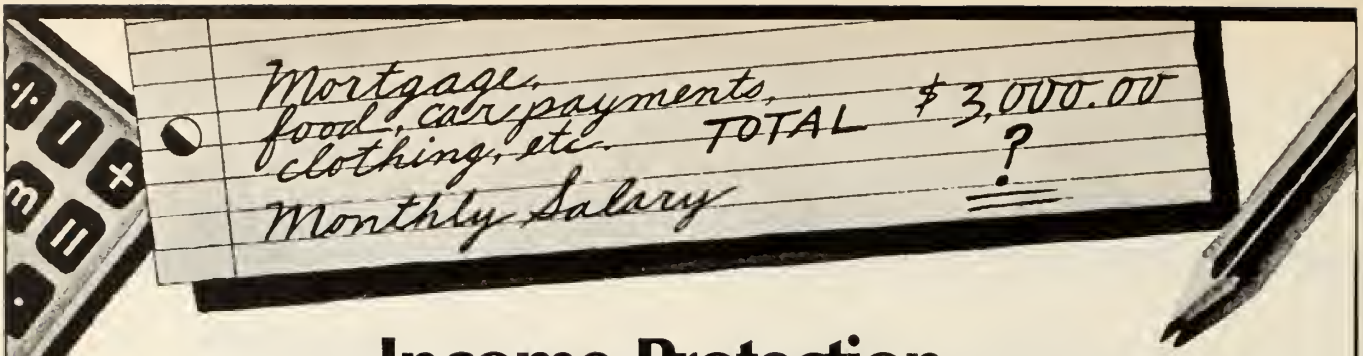
■

131st Annual Convention Exhibitors

3M Riker
St. Paul, Minn.
Abbott Laboratories
North Chicago, Ill.
Adria Laboratories
Columbus, Ohio
Analysys
St. Louis
Automated Professional Management, Inc.
Creve Coeur
Blue Cross and Blue Shield of Missouri
St. Louis
Bristol Laboratories
Evansville, Ind.
Charter Hospital of Columbia
Columbia
Clear Pointe
Lake Ozark
ConvaTec
Liberty
Dodson Group
Kansas City
D-R Systems, Inc.
Manchester
Encyclopaedia Britannica, USA
Chicago, Ill.
Esch Information Systems, Inc.
Springfield
Fred S. James & Co. of Missouri, Inc.
Kansas City
Glaxo, Inc.
Dallas, Texas
Hoechst-Roussel Pharmaceuticals Inc.
St. Charles
Insurance Corp. of America
Houston, Texas
Janssen Pharmaceutica
Florissant
Johnston's Inc.
Shawnee, Kan.
The Key Company
St. Louis
Key Pharmaceuticals
St. Louis
Kimberly Quality Care
Overland Park, Kan.
J.B. Lippincott
Indianapolis, Ind.
McNeil Consumer Products Co.
Kansas City
Mead Johnson Pharmaceutical Division
Evansville, Ind.
Medical Defense Associates
Springfield
The Medical Marketplace
St. Louis
The Medical Protective Company
Fort Wayne, Ind.
Missouri Rehabilition Center
Mt. Vernon
Missouri State Medical Association
Jefferson City
MOMEDICO
St. Louis
MSMA Retirement Plan System/Prudential Bache
St. Louis
Office Tech. Inc.
St. Louis
Parke-Davis
Morris Plains, N.J.
Research Medical Center
Kansas City
Risk Control Associates, Inc.
Springfield
Schering Corporation
Kenilworth, N.J.
Schering Corporation - Dermatology Division
Webster Groves
SmithKline Bio-Science Laboratory
St. Louis
Smith Kline & French Laboratories
Philadelphia, Pa.
Social Security Administration
Kansas City
Trinity Lutheran Hospital
Kansas City
U.S. Air Force
Creve Coeur
The Upjohn Company
St. Louis
Wyeth - Ayerst Laboratories
Philadelphia, Pa.

In lieu of exhibits, the following firms have made cash donations to assist in the sponsorship of Scientific Programs:

Eli Lilly and Company — Pharmaceutical Division
Indianapolis, Ind.
Mead Johnson Pharmaceuticals
Evansville, Ind.
Syntex Laboratories
Palo Alto, Calif.
American Business Machines, Co., Inc.
Springfield



Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance
programs offer you coverage and
cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: **James**
FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______

Address ______

City ______ State ______ ZIP ______

Phone: ( ) ______ Best time to call: ______

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

Medical School News

St. Louis University

■ **James E. Benecke, Jr., M.D., F.A.C.S.**, has been named associate professor and director of otology and neurotology in the department of otolaryngology, St. Louis University School of Medicine, effective July 1, 1989. The announcement was made by **Michael D. Maves, M.D.**, chairman of the department of otolaryngology.

Dr. Benecke comes to St. Louis from the University of Southern California (USC) where, since 1985, he has been assistant clinical professor in the department of otolaryngology. Since 1986, he has also held the title of assistant clinical professor in the department of surgery at the University of California at Irvine (UCI).

Dr. Benecke earned his medical degree from Indiana University School of Medicine in Indianapolis in 1978. Dr. Benecke is the author of numerous publications including a newly published book titled, "Atlas of Micro-Otoneurosurgical Procedures."

■ **Richard S. Kurz, Ph.D.**, associate director of the Center for Health Services Education and Research (CHSER) and associate professor and chairman of the department of hospital health care administration, has been appointed chairman-elect of the Association of University Programs in Health Administration (AUPHA).

AUPHA is a national consortium of collegiate programs which prepares individuals for management careers in the health field. The organization was established 44 years ago.

Dr. Kurz will assume the chairmanship at AUPHA's 1990 annual meeting next April in Chicago. The announcement was made at this year's annual meeting in Baltimore. Dr. Kurz has been a member of the association's board of directors since 1987.

Dr. Kurz joined the faculty of CHSER in 1978 to establish the graduate program in community health, which he directed until 1981. He came to the medical center from Lawrence University in Appleton, Wisc., where he served as assistant professor and chairman of the department of sociology. Dr. Kurz received his doctorate degree in sociology from the University of North Carolina, Chapel Hill in 1976.

■ Two forensic pathologists from St. Louis University School of Medicine have been appointed to chief medical examiner positions in the St. Louis area.

Mary E. Case, M.D., associate professor of pathology, has been named the chief medical examiner for St. Louis County. **Michael A. Graham, M.D.**, assistant professor of pathology, has been appointed the chief medical examiner for the City of St. Louis. In addition, Dr. Graham has been named director of the division of forensic and environmental pathology at St. Louis University School of Medicine.

The three appointments fill vacancies left by the late **George E. Gantner, M.D.**, professor in the division of forensic and environmental pathology at the medical school.

Dr. Graham has been on the staff of the city medical examiner's office since 1982. He earned his medical degree from St. Louis University School of Medicine in 1977. Dr. Graham also serves on the board of directors of the National Association of Medical Examiners.

Dr. Case has been associated with both the county and city medical examiner's office since 1975 and 1977, respectively. She earned her medical degree from St. Louis University School of Medicine in 1969 and has been a faculty member since 1973.

■ St. Louis University Medical Center announces the opening of the **F. X. Paletta Sr., M.D.**, plastic surgery library. The library, which is located on the 15th floor of Firmin Desloge Towers, contains numerous old textbooks and medical magazines as well as historical surgical instruments used in plastic surgery. Camera equipment used to document operations in the 1950s is also on display.

The library is named in honor of Francis Xavier Paletta Sr., M.D., F.A.C.S., the founder and first director of the plastic surgery program at St. Louis University School of Medicine. The program was instituted in 1957.

■ **Alan P. Knutsen, M.D.**, associate professor of pediatrics in the allergy and clinical immunology division, St. Louis University School of Medicine, has been awarded a two-year, $25,000 grant from Cutter Biological Miles, Inc.

Dr. Knutsen will seek to identify select immune deficiencies in children susceptible to recurrent urine and sinus infections or pneumonias.

Dr. Knutsen received his medical degree in 1975 from St. Louis University School of Medicine. From 1975-1978, Dr. Knutsen was a pediatric resident at Cardinal Glennon Children's Hospital on the campus of St. Louis University Medical Center. He spent two years as a pediatric allergy, immunology and pulmonary fellow at Duke Medical Center in Durham, N.C., before returning to St. Louis in 1980.

■ St. Louis University School of Nursing in cooperation with St. Louis University School of Medicine and St. Louis College of Pharmacy is offering a rare opportunity to gain awareness of the influence of culture upon health care delivery through a 14-day tour of Kenya, Africa. The tour leaves St. Louis August 6 and returns August 20. Participants will have the opportunity to study the interaction between traditional and modern health practices in Kenya and learn about societal changes upon health care in general.

Joseph Moreno, M.A., M.M.E., R.M.T.-B.C., director of music therapy at Maryville College, St. Louis, is the tour director. He is an international lecturer and author on the implications of traditional health care for an expanded approach to psychotherapy. **Virginia Luetje, R.N., M.S.N.**, is co-director of the tour. She is widely experienced in education and consulting on holistic health concepts. Both participated in a trip to Kenya in January.

The program will allow participants to observe modern health care practices through visits to rural and urban hospitals. Participants will be able to observe the renowned African Medical Research Foundation (Flying Doctors), and become acquainted with traditional medicine in Kenya through observing and interacting with indigenous healers and herbalists.

The African journey provides the opportunity to earn 25 contact hours (2.5 CEU's) from St. Louis University School of Nursing Continuing Education Program and 21 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association through St. Louis University School of Medicine. The trip is also open to those not interested in continuing education. The approximate cost is $3,505.

For more information, contact London International Travel at (314) 567-6577 or St. Louis University School of Nursing at (314) 577-8920.

■ More than 165,000 deaths are caused by trauma each year in the United States. In order to provide the latest information, The University Hospital, The American Association of Critical-Care Nurses and the New Medico Head Injury System co-sponsored the Second Annual Spring Symposium, titled "Care of the Multiple Trauma Patient." The one-day event was held May 24 at the Embassy Suites Hotel in St. Louis.

The focus of the symposium was to provide a greater understanding and insight of trauma to physicians, nurses, paramedics and other health care professionals. Topics that were addressed included new techniques in nursing care, spinal cord and reimplantation injuries, multiple organ failure, traumatic aortic rupture and the future of trauma.

Physicians, nurses and administrators from St. Louis University Medical Center made presentations on various topics. They included: **Michael A. Graham, M.D.**, assistant professor of pathology; **Mary J. Keegan, R.N., MSN**, trauma nurse specialist, **Timothy S. Loth, M.D.**, assistant professor of orthopedics and chief of hand and microvascular division; **Lawrence R. McBride, M.D.**, assistant professor of surgery and surgical director of transplantation; **Thomas Pittman, M.D.**, chief resident of neurosurgery; **Herbert B. Schneiderman**, hospital chief executive officer; **Marc J. Shapiro, M.D.**, assistant professor of surgery and director of trauma surgery.

■ More than 600 people joined St. Louis University Medical Center's Fifth Annual Candlelight March in downtown St. Louis on April 27. This year's march, titled "Pass on the Light of Life," was held in memory of 17-year-old Terry Miles Jr., a heart transplant recipient who lived seven years as a result of organ donation before his death in April.

Miles was born with a defective heart and underwent open heart surgery at age 9. On August 29, 1982, he underwent his first heart transplant at The University Hospital, St. Louis University Medical Center, at which time the ten-year-old was believed to be the youngest surviving heart transplant recipient in the country. On March 31, 1988, he underwent a second heart transplant at The University Hospital.

At sundown, the march proceeded to the Overlook Stage under the Arch. A short prayer service and tribute to Terry Miles, including a song by Terry's classmates at Lutheran High South, concluded the event.

The Candlelight March was sponsored by St. Louis University Medical Center in cooperation with American Red Cross Tissue Services, Bethesda Eye Institute, Mid-America Transplant Association and the National Kidney Foundation.

University of Missouri-Columbia

■ **Maria Evans**, a third-year student at the MU School of Medicine, has been selected as the 1989 recipient of the *Jerry L. Pettis Memorial Scholarship*, given annually by the American Medical Association. Named for the late member of the U.S. Congress from California who founded the Audio-Digest Foundation, the scholarship is for $2,500 and is awarded to a junior or senior medical student with a demonstrated interest in the communication of science. Evans accepted the award at a ceremony during the opening session of the AMA's House of Delegates meeting June 18 in Chicago. A spokeswoman for the AMA Education and Research Foundation said Evans, the first winner from Missouri, was selected from 22 nominees from across the country.

■ **Imad M. Al-Basha, M.D.**, assistant professor of psychiatry, gave a talk on panic disorder in patients with normal angiograms to the Academy of International Physicians during the annual meeting of the Missouri State Medical Association in St. Louis in April.

■ **Larry Baddour, M.D.**, associate professor of infectious diseases, has been elected to fellowship in the American College of Physicians.

■ **David P. Clark, M.D.**, assistant professor of dermatology, is serving on a special task force of the Literature Selection Technical Review Committee for the National Library of Medicine. The task force is helping to identify journals that are useful to specialists in dermatology.

■ **Frank Engley, Jr., Ph.D.**, professor of microbiology, recently presented talks on sterilization and disinfection at the International Conference on Infectious Diseases in Morelia, Mexico.

■ **Armando Favazza, M.D.**, professor and associate chairman of psychiatry, in May presented an invited lecture at the Karolinska Institute in Stockholm, Sweden. His topic was "Deliberate Self-Harm."

■ **Robert B. Fisher, D.O.**, recently joined the department of anesthesiology as an assistant professor. He completed his anesthesiology residency at MU in 1983. In 1986, he became an assistant clinical professor of anesthesiology as well as director of anesthesiology at the Ellis Fischel State Cancer Center. In 1987, he became a consultant in anesthesiology for the Truman Memorial VA Hospital.

■ **Bruce Harry, M.D.**, associate professor of psychiatry, has been elected president of the Midwest Chapter of the American Association of Psychiatry and the Law. Dr. Harry, who holds a joint appointment as adjunct associate professor of law, also has been selected to serve as co-editor for the forensic issue of the *Journal of*

Current Opinion in Psychiatry, to be published later this year.

■ **Mary Helikson, M.D.,** clinical assistant professor of pediatric surgery, has been elected president of the Missouri State Surgical Society. She is the first woman to hold this position.

■ **Syed Arshad Husain, M.D.,** professor and chief of child and adolescent psychiatry, has been appointed by the World Health Organization to be a consultant on child psychiatry programs in the Eastern Mediterranean region. Dr. Husain's initial assignment, for one month beginning May 19, was to survey child psychiatry services in Pakistan and make recommendations for changes.

In early May, Dr. Husain presented three talks and participated in a number of committee and task force meetings at the annual convention of the American Psychiatric Association in San Francisco. Dr. Husain discussed "Racism in Psychiatry Revisited" at a symposium on prejudice, which he chaired. He also presented a paper on "Concept and Treatment of Mental Illness in Islam" at a session on international perceptions of mental illness and psychiatry. He also gave a talk on "Cultural Issues in the Development of the Diagnostic and Statistical Manual."

■ **Alfred S. Llorens, M.D.,** professor of obstetrics and gynecology, in April attended the fourth International Symposium on GYN Oncology, Surgery and Oncology in Newport Beach, California.

■ **Karl Nolph, M.D.,** professor and chief of nephrology, presented "CAPD – How I Do It" at the Nephrology Registrar's Club at the University of Warwick, Coventry, England. Dr. Nolph also presented "Serum and Urinary Anion Gaps and Other Comments on Interpreting Urinary Chemistries" as a visiting professor at the University of Dundee, Scotland, in April.

■ **John Schuder, Ph.D.,** professor emeritus of cardiothoracic surgery, presented "General Superiority of Biphasic Over Uniphasic Shocks in Cardiac Defibrillations" at the 10th annual conference on International Electronics and Electrical Engineering in New Orleans. Colleagues **Wayne McDaniel, Ph.D.,** research assistant professor of surgery; **Gregory Flaker, M.D.,** associate professor of cardiology; and **Harry Stoeckle , Jr., M.D.,** professor emeritus of child health, also contributed.

■ **Michael Scott, Ph.D.,** assistant professor of neurology, presented "Examining the Reading and Spelling Skills of Slow Learners: Frith's Model of Developmental Dyslexia" at the 17th annual meeting of the International Neuropsychological Society in Vancouver, British Columbia. Dr. Scott and **Paul Sahota, M.D.,** assistant professor of neurology, also presented "Epilepsy in the Neuropsychologically/Learning Impaired" at the International Symposium on Neurobehavioral Problems in Epilepsy in New Orleans.

■ **Jayendra H. Shah, M.D.,** professor of endocrinology and vice chairman of the department of medicine, presented "Sex Differences in Insulin Release Induced by Meritene and Amino Acids" at the 13th International Diabetes Federation Congress in Sydney, Australia.

■ **Yoshihiko Takeda, M.D.,** research fellowship trainee in the division of immunology and rheumatology, will attend the first international workshop on the Molecular and Cell Biology of Autoantibodies and Autoimmunity set for July 27-29 in Heidelberg, West Germany.

■ Several representatives of the MU Arthritis Center attended the first Regional Arthritis Center Conference, in April in Jefferson City. The conference brought together RAC directors, Missouri Arthritis Advisory Board Members, Department of Health representatives and the Arthritis Foundation group vice president for chapter operations. The following were the MU representatives: **Gordon Sharp, M.D., Marian Minor, Ph.D., Lavona Virgen, John Reid, Ph.D., Joyce Mitchell, Ph.D., Robert Hoffman, D.O., Susan Hazelwood, Carole Belgya, and Pam Hall.**

■ The University of Missouri-Columbia will produce a series of video teaching tapes that will be marketed nationwide to medical and nursing educators and health-care providers. The videotapes will illustrate selected aspects of primary care for medical and nursing students, residents and health-care providers in clinical practice.

The project, funded by an $189,703 grant from the W.K. Kellogg Foundation of Battle Creek, Mich., will use portions of videotaped clinic visits from a previous six-year Kellogg Foundation-funded study of family physicians and nurse practitioners. The tapes show an array of on site, private practice conduct between physicians, nurse practitioners and patients. The videotapes will demonstrate a realistic way to teach model behaviors for the delivery of health care.

"Encounters in Primary Care: the Development of Video Training Tapes for Primary Care Providers" is being spearheaded by **James Campbell, Ph.D.** and **Steven Zweig, M.D.,** assistant professors of family and community medicine.

University of Missouri-Kansas City

■ An accreditation team from the Liasion Committee for Medical Education made a site visit to the School of Medicine in May. The five-member team has forwarded its recommendations to the full LCME committee which will make its announcement concerning accreditation in September.

■ Former Kansas City, Missouri Mayor **Charles B. Wheeler, Jr., M.D., J.D.,** will serve as an adjunct professor and consultant for the Henry W. Bloch School of Business and Public Administration and the UMKC School of Medicine.

The Hallmark Foundation provided the funding for Dr. Wheeler's two-year joint appointment.

■ **James F. Stanford, M.D.,** assistant professor of medicine, made a Grand Rounds presentation on "Meningitis: New Concepts in Pathogenesis and Treatment" at the University of Missouri-Columbia, and lectured on "Meningitis" at Menorah Medical Center in Kansas City, Mo., and "Enterococcus: Nosocomial Pathogen of the 1990's" at the Fischel Cancer Hospital in Columbia, Mo.

■ **Len Scarpinato, D.O.**, assistant professor of Community Medicine and Family Practice, recently spoke on "Long Term Care and the Impact of HIV on Truman Medical Center" before the Joint Professional Conference Committee.

■ **Edward L. Mosby, D.D.S.**, associate professor and vice chairman, Department of Hospital Dentistry, recently made a number of presentations including "Assessment of Teflon Proplast Implants in Temporomandibular Joint Surgery" for the Annual Meeting of the American Association of Oral and Maxillofacial Surgeons and "Temporomandibular Disorders: Diagnosis, Patient Evaluation and Treatment" for the Greater Kansas City Dental Society. "Temporomandibular Disorders: Diagnosis and Treatment" was Dr. Mosby's topic at a meeting of the Lake Tahoe Study Club and "Patient Satisfaction with Temporomandibular Joint Surgery" was his presentation at the American Association of Dental Research meeting in San Francisco, Ca.

■ **Margaret A. Dolan, M.D.**, instructor in pediatrics, is author of "A Comparison of 3-wheel and 4-wheel ATV Injuries in Children" which appeared in *Pediatrics*.

■ **Louise Arnold, Ph.D.**, professor and director of the Office of Medical Education and Research, recently was elected vice chair of the Central Region of the Association of American Medical College's Group on Medical Education (CGME). The vice chair position is a one-year appointment, which will be followed by one year each as chair-elect, chair, and past chair.

Dr. Arnold also has been editor of the Central Region's new newsletter, *Update*, which has a circulation of approximately 600.

■ **John Foxworth, Pharm.D.**, recently presented lectures on "Clinical Pharmacology of Cephalosporins" to the Emergency Physicians Group, Bethany Hospital, Kansas City, KS., and the Kansas City Emergency Physicians Foundation, Two Rivers Hospital.

■ **Stephen D. Waldman, M.D.**, clinical associate professor of anesthesiology, presented lectures on "Cancer Pain Management" at the University of Maryland Department of Anesthesia and on "Intraspinal Narcotics – An Overview" at the University of Texas-Houston's Department of Anesthesia.

■ **David S. McKinsey, M.D.**, clinical assistant professor of medicine, is author of "Epstein-Barr Virus Infections: Pathophysiology, Epidemiology and Clinical Manifestations" which appeared in the *Southwestern Association of Clinical Microbiology Newsletter.*

Washington University

■ Distinguished scientists throughout the United States presented a daylong symposium May 12 to mark the 25th anniversary of the Biomedical Computer Laboratory (BCL) and the Computer Systems Laboratory (CSL) at Washington University in St. Louis.

■ The symposium titled "Computer in Biomedicine: Issues and Challenges," featured a keynote address by **William F. Raub, Ph.D.**, deputy director of the National Institutes of Health (NIH), whose Division of Research Resources has funded the BCL and CSL programs since their inception.

Topics such as brain exploration with positron emission tomography (PET); diagnosing the risk of osteoporosis with ultrasound; molecular modeling and drug design; computing and molecular genetics; digital hearing aids; and micropipelined computer systems were discussed.

■ The director of the Lipid Research Center at Washington University School of Medicine received a $1.1 million grant to study the role of certain blood proteins in causing atherosclerosis.

The grant, from the National Institutes of Health, was awarded to **Gustav Schonfeld, M.D.**, Kountz Professor of Medicine in the Department of Internal Medicine.

A 1956 graduate of Washington University and a 1960 graduate of the School of Medicine, Dr. Schonfeld joined the faculty in 1968 as an assistant professor of medicine. He became a full professor in 1977 and was named Kountz professor in 1987.

Guest Editorial

continued from page 375

sician offers at least some support of his/her decision to consider a research trial. Then it is the responsibility of the consultant researcher to carefully educate the patient and his/her family about the proposed study, answer their questions, and help them to understand the significance of the questions being asked.

None of us would like to practice as our predecessors did, with little in the way of modern drugs, imaging devices, and the like. We have reaped the bountiful harvest of modern medicine from the research of our predecessors. I would argue that it is the responsibility of each one of us to insure that those who follow will have a comparable harvest for the benefit of their patients. We must plant the seeds.

■

Editor's note: *Dr. Perry is chairman of the department of medicine at the University of Missouri-Columbia School of Medicine and a member of the Editorial Board.*

New Members

■ **David A. Arrighi, M.D.,** 2301 Holmes, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Arrighi received his preliminary education at Kansas State University and obtained his medical degree at the University of Kansas School of Medicine in 1978. He completed his residency at St. Luke's Hospital of Kansas City, Kansas City, MO. Dr. Arrighi specializes in general surgery.

■ **Timothy M. Bateman, M.D.,** Medical Plaza II, Suite 20, 4320 Wornall Rd., Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bateman received his preliminary education at Brandon University and obtained his medical degree at the University of Manitoba-Winnipeg in 1976. He completed his residency at Cedar Sinai Medical Center, Los Angeles, CA. Dr. Bateman specializes in internal medicine/cardiovascular disease.

■ **Robert C. Clark, M.D.,** 900 N. Belt, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Clark received his preliminary education at the University of Kansas and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1983. He completed his residency at Trinity Medical Center, Carrollton, TX. Dr. Clark specializes in internal medicine.

■ **Richard B. Jennett, M.D.,** 200 St. Mary's Medical Plaza, Suite 302, Jefferson City 65102, has become a member of the Cole County Medical Society. Dr. Jennett received his preliminary education at Creighton University and obtained his medical degree at the University of Nebraska College of Medicine in 1981. He completed his residency at the University of Nebraska, Omaha, NE. Dr. Jennett specializes in gastroenterology/internal medicine.

■ **Paul S. Jones, M.D.,** 1722 W. 27th, P.O. Box 2009, Joplin 64803, has become a member of the Jasper County Medical Society. Dr. Jones received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1981. He completed his residency at the University of Kansas College of Health Sciences, Kansas City, MO. Dr. Jones specializes in diagnostic radiology.

■ **Peter J. Molberg, M.D.,** 1443 N. Robberson St., #803, Springfield 65802, has become a member of the Greene County Medical Society. Dr. Molberg received his preliminary education at Harvard College and obtained his medical degree at Stanford Medical School in 1975. He completed his residency at the University of Missouri Medical Center, Columbia, MO. Dr. Molberg specializes in family practice.

■ **Nazih H. Salam, M.D.,** One Hospital Drive, Dept. of Surgery, University of Missouri Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Salam received his preliminary education and obtained his medical degree at the American University of Beirut in 1968. He completed his residency at the University of Missouri Medical Center, Columbia, MO. Dr. Salam specializes in cardiothoracic surgery.

■ **Carolyn L. Siefert, M.D.,** 1100 W. 10th St., Suite 165, Rolla 65401, has become a member of the Mid-Missouri County Medical Society. Dr. Siefert received her preliminary education and her medical degree at the University of Missouri-Kansas City in 1983. She completed her residency at the Karl Menninger School of Psychiatry, Topeka, KS. Dr. Siefert specializes in psychiatry.

■STUDENT MEMBERS

University of Missouri-Kansas City

Carlin A. Ridpath

St. Louis University

Cheryl Y. Fleischman
Steven J. Granberg
Richard P. Hermann

Physician's Recognition Awards

Forty MSMA members qualified for the MSMA-AMA Physician's Recognition Award during April 1989. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Buchanan
Michael D. Dunlap, *St. Joseph*

Cape Girardeau
Debra S. Smithson, *Cape Girardeau*

Clay-Platte
Bryan L. Sitzmann, *Kansas City*

Cole
Harold K. Kanagawa, *Jefferson City*
Thomas D. Robbins, *Jefferson City*

Franklin-Gasconade-Warren
Horacio T. Crespo, *Warrenton*
Remedios R. Crespo, *Warrenton*

Greene
Kenneth D. Piker, *Springfield*
Ronald M. Wachter, *Springfield*

Henry
Kenneth F. Scott, *Clinton*

Jasper
William H. Crosby, *Joplin*
Nelson P. H. White, *Neosho*

Jefferson
Diosdado L. Maranan, *Arnold*

Lake of the Ozarks
Robert R. Lyle, *Versailles*

Metro. Med-Greater Kansas City
William F. Benson, *Kansas City*
James S. Bower, *Kansas City*
Arthur L. Brock, *Independence*
Mary E. Brothers, *Kansas City*
Herbert A. Dempsey, *Lee's Summit*
Padma Krishna, *Kansas City*
Larry E. Legler, *Independence*
John J. O'Hearne, *Kansas City*
Donald E. Philgreen, *Kansas City*
Kenneth C. Place, *Kansas City*

Northwest
Kanti L. Havaldar, *Maryville*

Pettis
Albert J. Campbell, *Sedalia*

Saline
Bedford F. Knipschild, *Marshall*
Richard C. Raynor, *Marshall*

SEMO
Jimmy D. Heath, *East Prairie*

South Central
Marvin L. Fowler, *West Plains*
Joe A. Wall, *Houston*

St. Louis Metropolitan
Arnold G. Brody, *St. Louis*
James A. Diestelhorst, *Creve Coeur*
William B. Gedney, *Valley Park*
Nicholas C. Kamakas, *Florissant*
Alice D. Kitchen, *St. Louis*
Percival B. Salanga, *St. Louis*
Wolfgang P. Schuessler, *St. Louis*
George L. Tucker, *Chesterfield*

Tri-Lakes
William H. Lauderdale, *Forsyth*

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

July

7 - 8 **CO_2 - Nd: YAG Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

12 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

14 -15 **The American College of Surgeons Cancer Management Course** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 600 S. Euclid, St. Louis, MO 63110. 314/362-6893.

20 **Symposium on Asthma** — Location: Washington University Medical Center. Contact: Cathy Caruso, CME Office, Washington University School of Medicine, Box 8063, 600 S. Euclid, St. Louis, MO 63110. 314/362-6893.

24 - 27 **Masters 3 Course in Advanced Death Investigation** — Location: St. Louis University Learning Resources Center. Contact: Mary Fran Ernst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/854-6500.

28 - 29 **Advanced Trauma Life Support Provider Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S.Grand Blvd., St. Louis, MO 63104. 314/577-8372.

August

1 - 4 **3rd Combined Clinical Conference on Emergency Care** — Location: Marriott's Tan-Tar-A Resort, Osage Beach, Lake of the Ozarks. Contact: Dean Nierling, M.D., F.A.C.E.P., University of Missouri Hospital and Clinics, Columbia, MO 65212. 314/882-8091.

4 **Common Skin Problems** — Location: Research Medical Center, Kansas City, MO. Contact: Robert E. Gunnoe, M.D., Program Coordinator, Research Medical Center, The Ed Bixby Institute for Postgraduate Medical Education, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

6 - 20 **Traditional and Modern Health Care in Kenya** — Location: Travel Program to East Africa. Contact: Irene Kalnins, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8919.

11 **Nd: YAG Laser Resectoscope Hysteroscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

16 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

25 -26 **CO_2 - Nd:YAG Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

September

11 - 13 **Treatment of Destructive Behaviors in Persons With Developmental Disabilities** — Location: Masur Auditorium, Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, MD. Contact: Barbara McChesney, Prospect Associates, Suite 500, 1801 Rockville Pike, Rockville, MD 20852. 301/468-6555.

13 - 14 **Eighth Annual Symposium on Geriatrics and Gerontology** — Location: Clarion Hotel, St. Louis, MO. Contact: Diane Coibion, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/894-6510.

13 - 14 **Care of the Aged: Applications of Health Services Research** — Location: Clarion Hotel, St. Louis, MO. Contact: Conference Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

20 **Female Incontinence** — Location: Breckenridge Inn Frontenac, St. Louis, MO. Contact: Irene Kalnins, St. Louis University School of Medicine, CME Office, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

22 - 23 **1st Annual Update Course in Ophthalmology** — Location: Washington University School of Medicine, St. Louis, MO. Contact: Kathy Ryan, Box 8096, 660 S. Euclid Ave., St. Louis, MO 63110. 314/362-5722.

25 **Eighteenth Annual Wendell G. Scott Lecture: Pulmonary Embolism and Technology Assessment — Lessons from a Multicenter Trial.** Speaker: Dr. James H. Thrall, Harvard Medical School. Contact: Ronald G. Evans, M.D., Director, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7100.

27 **Lowering Lipids** — Location: Omni International Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402, S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

29 - 30 **Advanced Trauma Life Support Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8372.

October

5 - 7 **Biomedical Image Processing with Microcomputers** — Location: Marriott's Pavilion Hotel, St. Louis, MO. Contact: Loretta Giacoletto, CME Office, Washington University School of Medicine, Box 8063, S. Euclid, St. Louis, MO 63110. 314/362-6891.

6 - 8 **Ozark Chest Conference: Lung & Heart/Lung Transplantation** — Location: Tan-Tar-A, Lake Ozark, MO. Contact: American Lung Association of Eastern Missouri, 1118 Hampton Avenue, St. Louis, MO 63139-3196. 314/645-5505.

9 - 10 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

18 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

November

2 - 3 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

2 - 4 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis MO. Contact: Virgina Eason, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

10 - 11 **Nd:YAG Operative Hysteroscopy/Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

10 - 12 **Sixteenth Annual Symposium: Anesthesia and The Geriatric Patient** — Location: The Marriott Pavilion Hotel, One Broadway, St. Louis, MO. Contact: Geriatric Symposium, Dept. of Anesthesiology, Box 8054, Washington University School of Medicine, 660 S. Euclid, St. Louis, MO 63310. 314/362-6973.

15 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

December

1 - 2 **17th Annual Diabetes Symposium: Current Topics in Diabetes for the Practicing Physician** — Location: Hyatt Regency, St. Louis Union Station. Contact: Jeanne Rogers, Kilo Diabetes & Vascular Disease Research Foundation, 1227 Fern Ridge Parkway, #100, St. Louis, MO 63141. 314/434-6500.

8 - 9 **Head Injuries** — Location: Omni International Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ __________

Date of Birth __________

Smoker/Non-Smoker (circle one)

Name __________

Address __________

City/State __________

Zip __________ Phone __________

Why does
JACKSON &
COKER
recruit more
physicians
each year
than any other
company?

- ☐ Largest pool of available physicians in the nation
- ☐ Network of 7 regional offices nationwide
- ☐ Expertise that produces unparalleled results in recruiting quality physicians
- ☐ Proven system that produced over 1,000 placements in the last 3 years.

(800) 888-0121

With Regional Offices In:

JACKSON
AND COKER

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

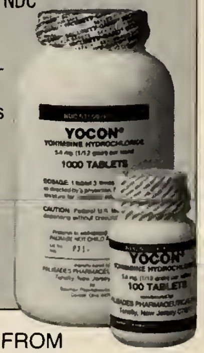
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES
PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

Final Disciplinary Actions

At the February 10-11, 1989 meeting of the State Board of Registration for the Healing Arts, the following final disciplinary actions were taken. In addition, the listing includes five reportable actions finalized since the December 2-3, 1988, meetings two reportable actions finalized since the August 19-20, 1988 meeting, and one reportable action finalized since the September 11-12, 1987 meeting not included in the last published listing (pg. 223, April 1989 MISSOURI MEDICINE). This information is made available to the public under the provisions of Section 334.101 RSMo.

■ **CARY H. FREEMAN, JR., M.D.** *Bakersfield, California* Order dated 12/21/88. Revocation of Missouri license. Violation: Section 334.100.2 (5)(8) RSMo. 1986

■ **JOHN J. CHESNICK, D.O.** *Corpus Christi, Texas* Order dated 1/18/89. Voluntary surrender. Violation: Section 334.100.2 (8) RSMo.

■ **NATHAN E. BYAM, D.O.** *Jefferson City, Missouri* Order dated 2/27/89. Two week suspension, one year probation. Violation: Section 334.100.2 (4d)(6) RSMo. Supp. 1987.

■ **JAMES LEE HILL, D.O.** *Duncanville, Texas* Order dated 1/24/89. Three years probation. Violation: Section 334.100.2 (2), 334.103 RSMo.

■ **JOHN L. BEATTIE, M.D.,** *Perry, Iowa* Order dated 3/24/89. Five years probation. Violation: Section 334.100.2 RSMo. 1986.

■ **SANTIAGO O. CARIN, M.D.,** *Benecia, California* Order dated: 10/28/88. Voluntary surrender. Violation: Section 334.100.2 (2)(4)(5) RSMo.1986

■ **PETER M. MARK, M.D.,** *Plymouth, Minnesota* Order dated 1/11/89. Voluntary surrender. Violation: Section 334.100.2 (1)(4h)(8)(13)(24) RSMo. 1986.

■ **IRVING M. GOLDFARB, D.O.** *Morris Plains, New Jersey* Order dated 9/13/87. Voluntary Surrender. Violation: Section 334.100.2 (2), 334.103 RSMo.

■ **DONALD APPELBAUM, D.O.,** *Fair Lawn, New Jersey* Order dated 3/17/89. Revocation of Missouri license. Violation: Section 334.100.2 (5) (8) RSMo. Supp. 1987

■ **CHRIS DEMETRIOU, D.O.,** *Pasadena, Texas* Order dated 3/10/89. Revocation of Missouri license. Violation: Section 334.100.2 (5)(8)(13) RSMo. 1986

■ **RICHARD O. COE, M.D.,** *Overland Park, Kansas* Order dated 3/3/89. Voluntary surrender. Violation: Section 334.100.2 (1)(8) RSMo. 1986

■ **JAMES O. JACKSON, M.D.,** *Rochester, Minnesota* Order dated 2/11/89. Voluntary surrender. Violation: Section 334.100.2 (8) RSMo.

■ **WILLIAM P. JOHNSON, M.D.,** *Taos, New Mexico* Order dated 3/15/89. Voluntary surrender. Violation: Section 334.100.2 (1)(8) RSMo. 1986

■ **VINCENT H. LINZ, M.D.,** *Cincinnati, Ohio* Order dated 2/11/89. Volunatry surrender. Violation: Section 334.100.2 (8) RSMo.

■ **VERNON J. SLOAN, D.O.,** *New Smyrna Beach, Florida* Order dated 4/18/89. Voluntary surrender. Violation: Section 334.100.2 (8) RSMo. Supp. 1987

■ **WILLIAM O.L. SEABAUGH, M.D.,***Cape Girardeau, Missouri* Order dated 2/10/89. Probation. Violation: Section 334.100.2 RSMo.

■ **ROBERT T. NUCKLES, D.O.,** *Lincoln, Missouri* Order dated 2/11/89. Cease and desist letter. Violation: Section 334.010 RSMo. 1986 & 195.030.2 RSMo. 1986

The Dodson Dividend Plan

A program for workers' compensation insurance that gives you the opportunity to earn a dividend at the end of your policy year, depending on claim experience.

Our Plan has been approved by the Missouri State Medical Association since 1983.

Insured MSMA members have received dividends as high as **35%**. Returns of premium now average **16.22%** per year.

With returns like these, shouldn't you insure with Dodson, too?

1-800-825-3760
Ext. 2990

underwritten by
Casualty Reciprocal
Exchange, member

DODSON GROUP
9201 State Line Road
Kansas City, MO 64114

In Memoriam

■ **Hugh V. Ashley, M.D.**, died April 1, 1989 at the age of 96. Dr. Ashley, a general practitioner, practiced medicine for many years in Cape Girardeau. He obtained his medical degree at the National University of Arts and Sciences Medical Department of St. Louis in 1915. Dr. Ashley was a member of the Cape Girardeau County Medical Society.

■ **Daniel J. Cutcliff, M.D.**, died May 15, 1989 at the age of 67. Dr. Cutcliff, an internist, practiced medicine for 38 years in southwest Kansas City before retiring in 1987. He obtained his medical degree at the Creighton University School of Medicine in 1945. Dr. Cutcliff was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Eugene O. Parsons, M.D.**, died May 11, 1989 at the age of 89. Dr. Parsons, a surgeon, practiced surgery in the Kansas City area for 38 years. He retired in 1968. He served on the executive staff at St. Luke's Hospital, where he was chief of surgery in 1958 and chief of staff in 1963. Dr. Parsons was also an associate in surgery on the medical school staff at Kansas University Medical Center and a consulting surgeon at the Leavenworth Federal Penitentiary. He obtained his medical degree at the Washington University School of Medicine in 1927. Dr. Parsons was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Jesse W. Young, M.D.**, died April 29, 1989 at the age of 84. Dr. Young, a general practitioner, practiced medicine for more than 50 years in the Rosedale community of Kansas City, Kansas. He shared an office with his brother, Fred C. Young, M.D., who preceded him in death. He obtained his medical degree at the University of Kansas in 1932. Dr. Young was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Ivan Zahony, M.D.**, died May 6, 1989 at the age of 59. Dr. Zahony, an anesthesiologist, practiced medicine in the Kansas City area for more than 24 years. Born in Hungary, Dr. Zahony obtained his medical degree at the University of Budapest School of Medicine in 1953. Dr. Zahony was a member of the Metropolitan Medical Society of Greater Kansas City.

Classifieds

Physicians Wanted

INTERNAL MEDICINE — SPRINGFIELD, Mo: Join 6-physician IM group; expanding practice, primary and critical care; affiliation with several major hospitals; optional teaching activities; call shared equally; competitive salary/benefit package; 230,000 metro population; CONTACT: Phil Kelbe 1-800-338-7107.

MISSOURI: Immediate opening for full-time or part-time emergency physician in 120-bed hospital in community of 10,000 in southeast Missouri. 9,000 visits annually. ACLS, ATLS required. Send CV to Comprehensive Emergency Care, Inc., P.O. Box 565, Kennett, MO 63857; 314/888-1511.

ONE PSYCHIATRIST — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board certified or eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, board certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). For information contact: Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

FAMILY PRACTICE — HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hospital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar opportunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435; 612/835-5123**

FAMILY PRACTICE for single-specialty group in Ozark Mountain Country. Excellent opportunity in clinic. Guaranteed minimum. For information contact: Sandra Mizell, Office Manager at 417/256-2111.

SURGEON OPPORTUNITY. Immediate opening for general surgeon in rural Nebraska. Board certified or board eligible. Must be licensed in Nebraska. Excellent benefits. Great hunting and fishing. Wallace & Panzer, M.D., P.C., 807 N. Ash, Gordon, NE; phone 308/282-1164.

DIAGNOSTIC RADIOLOGIST — Competitive salary and early partnership. Busy practice includes 100-bed general hospital and multispecialty clinic. Competence in all modalities except MRI. Dan Sullivan, M.D. or John Morgan, M.D., 3525 S. National, Suite 110, Springfield, MO 65807.

HEALTHLINE PHYSICIAN SERVICES, an affiliate of St. Louis University Medical Center, is recruiting for an Emergency Department Medical Director and Staff Physicians at Hannibal Regional; Hannibal, Missouri. Growth oriented program in historic Missouri river town. Good compensation, benefits, paid liability. Part-time/locum tenens also available. Contact William J. Salmo, HealthLine Physician Sevices, 3663 Lindell Blvd., Suite 410, St. Louis, Missouri 63108; 1-800-443-3901.

PRACTICE ANALYST — National practice transition consulting firm is looking to add full and part -time ambassador analysts to its Missouri offices. Comprehensive training provided. For information, call 1-800-32-AFTCO.

E.R. PHYSICIANS/PART-TIME — Liberty Healthcare Corp., a 12-year-old medical management corporation, has part-time positions available in moderate volume ERs in several facilities in the midwest. We offer competitive salary and paid malpractice. Shifts available to suit your particular schedule. We seek physicians with E.R. experience. If you are a 2nd-year EM resident, 3rd-year FP or IM resident, Liberty Healthcare can provide you with worthwhile, rewarding part-time career opportunities. For more information, call E.R. specialist, Annamarie Alleva, 1-800-331-7122 toll free or send C.V. to: **Liberty Healthcare Corp.**, Dept 0, 399 Market Street, Philadelphia, PA 19106. EOE.

FAMILY PRACTICE/INTERNIST. Have a large solo practice in fast-growing St. Charles County, looking for partner. Close to 4 hospitals. Office space also available. Call 314/272-5454 from 1:00 p.m. to 5:00 p.m. weekdays except Wednesday. Address: 1001 Highway K, O'Fallon, Missouri 63366.

Physicians Wanted

CHICAGO/ST. LOUIS

Superbly trained Internists and Family Practitioners, BC/BE, wanted for innovative practice building and practice ownership opportunities in the Chicago and St. Louis environs. Management support in a fee-for-service setting is provided. Compensation includes a competitive income guarantee with substantial bonus incentive.

To express interest, send your CV to:

Lori Jones
MedFirst Medical Management, Inc.,
5515 North Cumberland Avenue,
Suite 808,
Chicago, Illinois 60656.
Or call, COLLECT: (312)774-3443.

MedFirst™
Medical Management, Inc.
CHICAGO

PRIMEDICAL
Physician Care Centers
ST. LOUIS

FAMILY PRACTICE OPENING — Join established family practice clinic near 32-bed hospital. Competitive salary and benefits. Medical support from seven major hospitals with consultation and educational services. Family-oriented, supportive community in scenic N.E. Iowa. Contact Richard Phillips, Community Memorial Hospital, P.O. Box 519, Postville, Iowa 52162. 319/864-7431.

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

Practice for Sale

FOR SALE, GENERAL PRACTICE, gross $200,000/year; 90% third party pay. Retiring after 40 years successful medical practice. Solo or group. Fully equipped brick medical building with income from rentals, also for sale, or rent with option to buy after 1 year. St. Louis suburb, P.O. Box 5711, St. Louis, MO 63121.

Investment

$5,000-$60,000: FOR PHYSICIANS — Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including Taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Equipment for Sale

MEDICAL OFFICE EQUIPMENT from ambulatory care center, that includes laboratory and X-ray equipment, audio booth, Holter Monitor and large trash compactor. Used 1 ½ years. If interested call 417/869-7006. Ask for Sybil.

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.,** P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Dodson Insurance 434

Eli Lilly 376

Forrest T. Jones 394

Fred S. James 422

I.C. System 398

Intrav 412

Invest in Missouri Program 374

Jackson & Coker 432

Medical Defense Associates 438

Medical Protective Company 377, 397

MOMEDICO 366

Palisades Pharmaceuticals 432

PIE Mutual Insurance Company 388

Roche 439-440

Risk Control Associates 368

United Missouri Banks 392

Wes Woodbury 431

Integrity.
Yours, and
Ours.

Financial soundness.
Yours, and
Ours.

The future.
Yours, and
Ours.

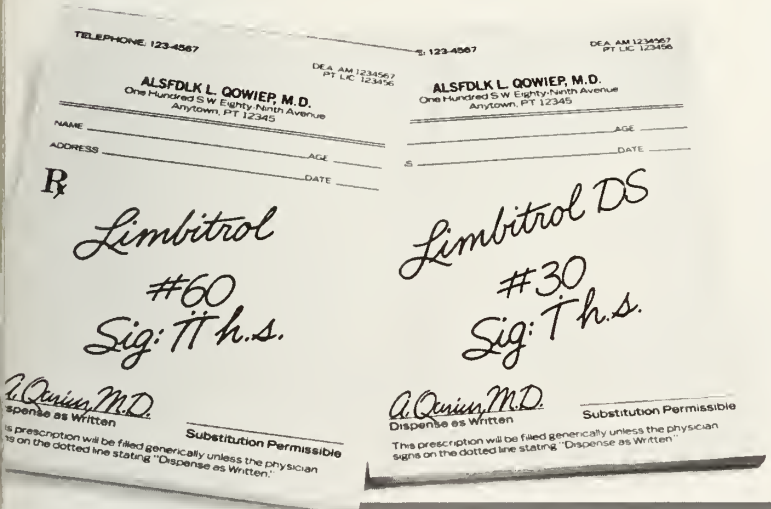
Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MEDICAL PROFESSIONAL LIABILITY INSURANCE

In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



TELEPHONE: 123-4567
DEA AM 1234567
PT LIC 123456
ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345
NAME
ADDRESS
AGE
DATE
℞
Limbitrol
#60
Sig: ii h.s.
A. Quiuy, M.D.
spense as Written
Substitution Permissible
s prescription will be filled generically unless the physician
s on the dotted line stating "Dispense as Written."

S: 123-4567
DEA AM 1234567
PT LIC 123456
ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345
AGE
S
DATE
Limbitrol DS
#30
Sig: i h.s.
A. Quiuy, M.D.
Dispense as Written
Substitution Permissible
This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written"

Protect Your Prescribing Decision: Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

References: **1**. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2**. Feighner JP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

Limbitrol® Ⓘⓥ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE **Roche Products**

Roche Products Inc
Manati, Puerto Rico 00701

P I. 0288

In the depressed and anxious patient

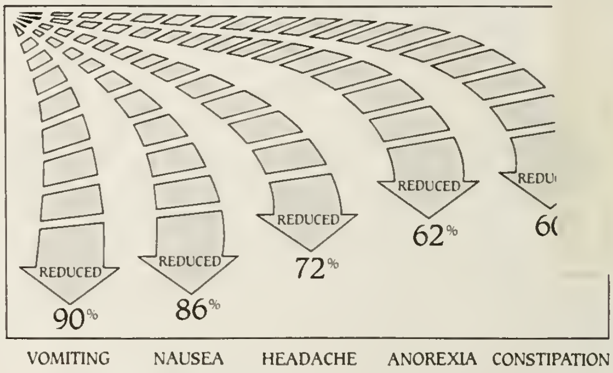
See Improvement In The First Week[1]

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Sym
During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

ROCHE Roche Products

Copyright © 1989 by Roche Products Inc. All rights reserved.
Please see summary of product information inside back cover.

FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

Journal of the Missouri State Medical Association August 1989

[redacted]

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA.
AUG 22 1989

1989-1990 MSMA

Membership Directory

You didn't go into medicine to become a human target.

Every day you put your reputation and practice on the line. And, with the increasing barrage of malpractice claims, your business has become a virtual firing line.

Now, you can do something about it. Protect yourself with MOMEDICO. We're the only physician owned professional liability insurance company founded and endorsed by the Missouri State Medical Association. MOMEDICO is a stock insurance company rather than a mutual assessable company. The overwhelming majority of our stock and policy holders are Missouri physicians.

At MOMEDICO we are proud of our reputation for highly trained and totally committed field service representatives. Our reputation for results is outstanding, too. Of all cases handled to conclusion, over 80% were closed without any payment of indemnity. So, if you find yourself on the firing line, MOMEDICO is the company that lines up to protect you.

MOMEDICO. . .the best company a physician can keep.

MOMEDICO

Better Protection. Together.

10795 Watson Road
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

Contents

Missouri Medicine

Editor	Donald G. Sessions, M.D.
Associate Editor	Ramona M. Chapman, M.D.
Editor Emeritus	Jordan W. Burkey, M.D.
Managing Editor	Susan Flanigan Gold
Editorial Assistant	Valerie A. Peters

Editorial Board

Anesthesiology	Mark G. Zukaitis, M.D.
Cardiovascular Surgery	Jack J. Curtis, M.D.
Dermatology	Philip C. Anderson, M.D. John DeSpain, M.D. Ernest Lorenc, M.D.
Emergency Medicine	David M. Trantham, M.D.
Family Practice	William D. Bradshaw, M.D. Carl R. Kruse, M.D. Kirby L. Turner, M.D.
Gastroenterology	Jay P. Marshall, II, M.D.
Hematology	William H. Crosby , M.D.
Internal Medicine	John S. Daniels, M.D. Stephen Hamburger, M.D. Robert K. Skillman, M.D.
Neonatology	Elizabeth J. James, M.D.
Neurosurgery	Keith Rich, M.D.
Obstetrics and Gynecology	James Daly, M.D.
Oncology	Michael C. Perry, M.D.
Ophthalmology	John C. Hagan, III, M.D. F. Thomas Ott, M.D.
Orthopedics	William P. Thorpe, M.D.
Otorhinolaryngology	J. Regan Thomas, M.D.
Pathology	Scott A. Martin, M.D.
Pediatrics	R. Don Blim, M.D.
Physical & Rehabilitation Medicine	Paul E. Kaplan, M.D.
Plastic Surgery	Leroy Young, M.D.
Psychiatry	William F. Clary, M.D. J.C. Corvalan, M.D.
Radiation Therapy	MacDonald B. Logie, M.D.
Radiology	Donald R. Germann, M.D.
General Surgery	Mark S. Cotner, M.D. Richard O. Craig, M.D. Donald Silver, M.D. Michael Metzler, M.D.
Vascular Surgery	Kirt Nichols, M.D.
Urology	George M. Austin, M.D.

Publications Committee

Chairman	Donald G. Sessions, M.D.
Vice-Chairman	Ramona M. Chapman, M.D.
Members	Jack J. Curtis, M.D. John S. Daniels, M.D. Stephen Hamburger, M.D.

Cover

"Tulip Beds: Missouri Botanical Gardens," 20" x 24" oil on board painting by **John O'Dell** of *St. Louis.* The artist created this work specifically for the August 1989 cover of Missouri Medicine.

Special Article

467 Physicians' Charity Care Program
Gary A. Dyer, M.D., St. Joseph, *MO*

Directory Information

448 MSMA Officers, AMA Delegates and Alternates, Councilors and Vice Councilors

455 Code Numbers for Component Medical Societies

459 Designated Specialty Codes

461 Councilor Districts and Counties in Each District

462 Guide to Component Medical Societies

472 MSMA Committees and Commissions

474 Directory of Medical Specialty Organizations

476 Metropolitan Specialty Organizations

479 Insurance Plans Available to MSMA Members

480 Missouri Volunteer Health Agencies

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
AUG 22 1989

Departments

595 CME
598 Information for Contributors
598 Advertising Index
601 Classifieds

Employee Benefit Rx.

Before choosing the *right* medical group employee benefit plan, there's a lot to consider.

For instance, how comprehensive should an employee benefit plan be? Should your plan include Individually Directed Account options or 401(k) provisions? How do you know if you need trustee, investment management or administration services? Or plan and participant record keeping?

We can help you answer these important questions and design a program to your exact specifications.

If you're looking for the right employee benefits program for your medical group, call the United Missouri Employee Benefit Division, soon. You'll find our experts are just the "prescription" you need.

UNITED MISSOURI BANK
Member FDIC

P.O. Box 419226 Kansas City, Missouri 64141-6226
P.O. Box 1126 St. Louis, Missouri 63188
Outside of Missouri, call 1-800-821-7194
In Missouri, call 1-800-892-2945.

Missouri Medicine

l. 86, No.8 *Journal of the Missouri Medical Association* August 1989

MSMA PHONE BOOK

Missouri State Medical Association	314/636-5151
American Medical Association	312/645-5000
MSMA Physicians' Health Program	314/768-4990
MOMEDICO	1-800-392-8039
Dodson Insurance Group	1-800-825-3760
MSMA Retirement Plan/ Prudential-Bache Securities	1-800-877-9200 314/721-9200
Forrest T. Jones	1-800-892-7272
Fred S. James	KC 1-800-892-7105 St. Louis 1-800-445-9513
Health Care Financing Administration	816/426-5233
INTRAV	314/727-0500
Medicaid Provider Relations	1-800-392-0938
Medicare Provider Relations	1-800-392-3070
Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
Missouri Department of Health	314/751-6400
Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	(Preadmission) 1-800-392-8060 (General info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs	314/751-8042
Missouri State Board of Registration of the Healing Arts	314/751-2334

MSMA Officers

President	Marvin A. Singleton, M.D., *Joplin*
President-Elect	Gary A. Dyer, M.D., *St. Joseph*
Secretary	Norman P. Knowlton, III, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Clarence A. Martin, M.D., *Joplin*
Vice President	Jack Kayes, M.D., *St. Louis*
Vice President	Barbara Buchanan, M.D., *Kansas City*
Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*
Vice-Speaker	James B. Wolfe, M.D., *Springfield*

Councilors

Dorothy D. Reister, M.D., *Shawnee Mission*, Chairman
Carol F. Williams, M.D., *St. Louis*, Vice Chairman

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *Florissant*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Peters*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A.J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Robert T. Gibbons, Jr., M.D., *Overland Park, KS*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Ms. Laura Carlson, medical student, *Kansas City*
Charles Barbee, M.D., *Columbia*
Charlene Prather, M.D., *Kansas City*

Vice Councilors

Robert Schaaf, M.D., *Gower*
Carl R. Kruse, M.D., *Palmyra*
Meredith C. Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Jay Yedlin, M.D., *Kansas City*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Ms. Lora Mills, medical student, *Columbia*
Paul Petruska, M.D., *St. Louis*
Carla Siegfried, M.D., *St. Louis*

AMA Delegates

Keith Ashcraft, M.D., *Kansas City*
Vernon Balster, M.D., *St. Louis*
George Bohigian, M.D., *St. Louis*
Walter German, M.D., *Springfield*
Melvin C. Kasten, M.D., *Cape Girardeau*
Robert R. MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251
Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.
Subscription rates: $20 per year.
Second class postage paid at Jefferson City, Missouri and at additonal mailing offices.
Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.
Copyright 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS IN ANESTHESIOLOGY AND SURGICAL SPECIALTIES

If you are a resident in Anesthesiology, Orthopaedic Surgery, or General Surgery including Neurosurgery, Colon/Rectal, Cardiac/Thoracic, Pediatric, Peripheral/Vascular and Plastic Surgery, the Army Reserve has a new and exciting opportunity for you. The New Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Assistance Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of $706 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program. Call (collect) your U.S. Army Medical Department Reserve Personnel Counselor:

MAJOR LONNIE HOUK
(314) 263-4146

ARMY MEDICINE. BE ALL YOU CAN BE.

What do
income tax deductions,
financial security
and
medical
student loans
have in common?

The Invest in Missouri Program

Established in 1960, the Missouri State Medical Foundation (MSMF) provides low interest loans to Missouri students attending AMA-approved medical schools throughout the United States. The Foundation has provided more than 2,600 medical students with over $2.5 million in educational loans to date. Most of these funds have been provided through contributions of practicing medical professionals like yourself.

Now MSMF has created the **Invest in Missouri Program**. Your $5,000 or more investment not only provides funds for medical students but also gives you an *immediate* partial tax deduction **and** *extra* income at retirement.

The **Invest in Missouri Program** will help your future and that of colleagues in training. Please call or write today for more information.

The Invest in Missouri Program
Michael G. Grimes, MSMF Financial Advisor
Vice President, Prudential-Bache Securities
231 S. Bemiston Ave.
St. Louis, Missouri 63105
1/800-877-9200 • in St. Louis 721-9200

Complete the coupon and mail to: Michael G. Grimes, Vice President, Prudential-Bache Securities, 231 S. Bemiston, St. Louis, MO 63105

☐ Yes, I want to know more about the MSMF **Invest in Missouri** program. Please send me a no-obligation proposal. (*please print the information requested*)

Name ______________________________

Address ______________________________

City ____________ State ________ Zip ________

Date of birth ________ Date of retirement ________

Investment amount ______________

1989-90 Missouri State Medical Association

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

Gary A. Dyer
President-elect

Donald G. Sessions
Editor

Ramona M. Chapman
Associate Editor

Jordan W. Burkey
Editor Emeritus

Marvin A. Singleton
President

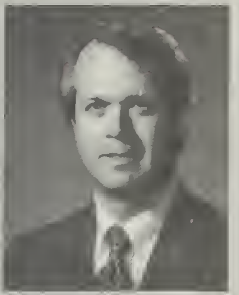
MSMA OFFICERS

T.J. Cooper
Immediate Past President

Clarence A. Martin
Vice-President

Jack Kayes
Vice-President

Barbara Buchanan
Vice-President


Norman P. Knowlton III
Secretary

Harry O. Cole
Treasurer

Jo-Ellyn M. Ryall
Speaker

James B. Wolfe
Vice-Speaker

AMA Delegates

Robert R. MacDonald
St. Louis

Hugh E. Stephenson, Jr.
Columbia

George Bohigian
St. Louis

Melvin C. Kasten
Cape Girardeau

Keith Ashcraft
Kansas City

Vernon Balster
St. Louis

Walter A. German
Springfield

AMA Alternate Delegates

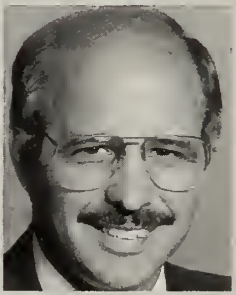
Richard V. Bradley
St. Louis

Jo-Ellyn Ryall
St. Louis

David W. Hall
Rogersville

H. Peter Ekern
Mexico

Carl Strauss
Kansas City


Robert T. Gibbons, Jr.
Kansas City

Nasreen Syed
Student Delegate

MSMA Councilors

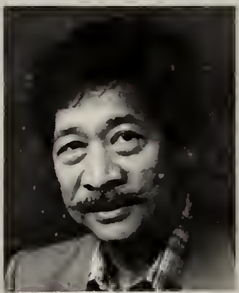
Dorothy D. Reister
Chairman
Seventh District

Carol F. Williams
Vice-Chairman
Third District

Stephen Vilmer
First District

Robert V. Tompson
Second District

J. Otto Lottes
Third District

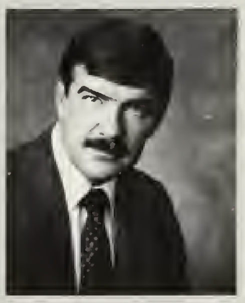

Arturo Montes
Third District

Frederick D. Peterson
Third District

David Wilkinson
Third District

MSMA Councilors

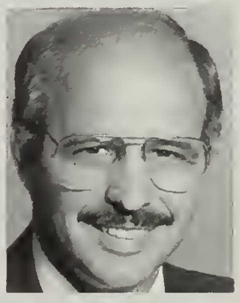
William H. Huffaker
Third District


J. Michael Conoyer
Fourth District

Alan L. Braun
Fifth District

Jerry Murrell
Fifth District

A. J. Campbell
Sixth District


Robert T. Gibbons, Jr.
Seventh District

Frederick W. Hahn
Seventh District

David W. Hall
Eighth District

Duane Hellam
Eighth District

David O. Barbe
Ninth District

Melvin C. Kasten
Tenth District

Laura Carlson
Student Councilor

Charles W. Barbee
HMSS Councilor

Charlene Prather
RPS Councilor

MSMA Vice Councilors

Robert Schaaf
First District

Carl R. Kruse
Second District

Meredith C. Payne
Third District

Sam L. Farrell
Fourth District

Ruth Kauffman
Fifth District

Jerry Meyer
Sixth District

Jay Yedlin
Seventh District

Robert Brigden
Eighth District

Thomas R. Stubbs
Ninth District

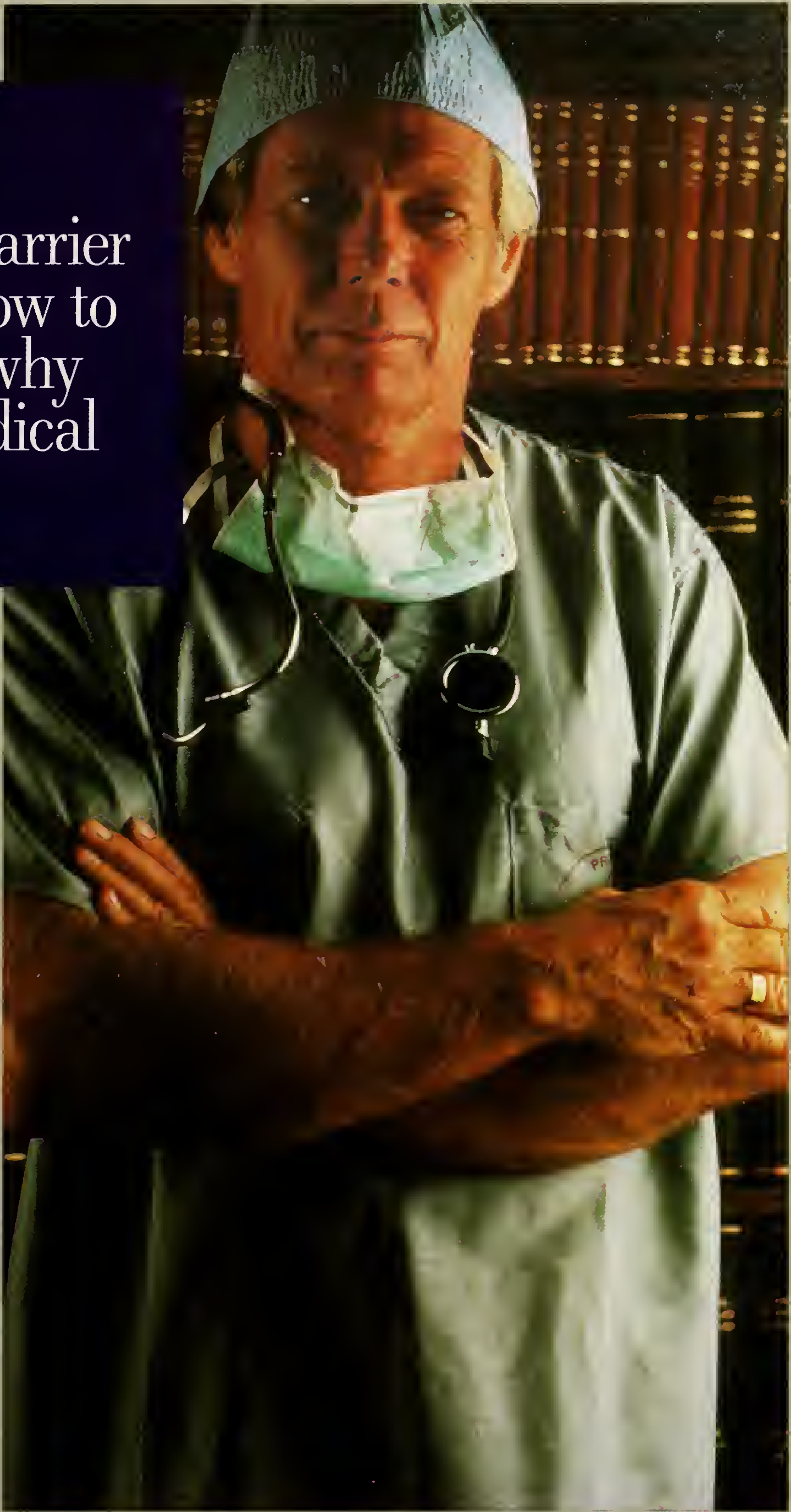
William C. Shell
Tenth District

Lora Mills
Student
Vice Councilor

Paul Pretruska
HMSS Vice Councilor

Carla Siegfried
RPS Vice Councilor

"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."



At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7300 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

Integrity.
Yours, and
Ours.

Financial soundness.
Yours, and
Ours.

The future.
Yours, and
Ours.

Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MEDICAL PROFESSIONAL LIABILITY INSURANCE

Code Numbers

for Component Medical Societies

Code	Society	Page
010	Andrew	520
014	Audrain	520
018	Barton	520
026	Boone (includes Cooper-Howard)	520
027	Boone-Resident Section	524
030	Buchanan	524
034	Butler-Wayne-Ripley-Carter	526
038	Callaway	527
042	Cape Girardeau	527
046	Chariton-Macon-Monroe-Randolph	529
050	Clay-Platte	529
054	Clinton	531
058	Cole (includes Moniteau-Osage)	531
066	Dallas-Hickory-Polk-Dade	532
070	Dunklin	532
074	Franklin-Gasconade-Warren	532
078	Grand River (Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn Mercer-DeKalb)	533
082	Greene	533
086	Henry	539
102	Jasper	539
106	Jefferson	541
110	Johnson	541
115	Laclede	541
118	Lafayette-Ray	541
120	Lake of the Ozarks (Camden-Miller-Morgan)	542
125	Metro Med - Greater Kansas City	542
126	Metro Med -Resident Section	557
135	Mid-Missouri (Phelps-Crawford-Dent-Pulaski-Maries)	557
138	Mineral Area (St. Francois-Iron-Madison-Washington-Reynolds-Bollinger)	558
146	Montgomery	558
150	Northeast (Clark-Lewis-Marion-Ralls-Scotland-Shelby)	558
158	Northwest (Nodaway-Holt-Atchison-Gentry-Worth)	559
162	North Central (Adair-Schuyler-Knox-Sullivan-Putnam)	559
166	Ozarks (Barry-Lawrence-Christian-Newton-McDonald)	559
170	Pemiscot	560
174	Perry-Ste. Genevieve	560
178	Pettis	560
186	Pike	560
189	St. Charles-Lincoln	561
190	St. Louis Metropolitan	562
195	St. Louis-Resident Section	588
198	Saline	588
202	SEMO (Stoddard-New Madrid-Mississippi-Scott)	588
206	South Central (Howell-Oregon-Texas-Wright-Douglas-Ozarks)	588
208	Tri-Lakes (Stone-Taney)	589
210	Webster	589
214	West Central (Bates-Cass-Cedar-St. Clair-Vernon)	589
216	St. Louis University	589
218	University of Missouri-Columbia	590
220	University of Missouri-Kansas City	590
222	Washington University	591

AIM HIGH

**AIR FORCE MEDICINE—
AN ATTRACTIVE ALTERNATIVE
TO PRIVATE PRACTICE.**

Are you sick of the paperwork battle? Are you more familiar with the latest computer technologies instead of those of your specialty? Are supply and equipment problems getting you down? Join the Air Force medical team, concentrate on your medical practice and leave the paperwork hassle to others. We use the group practice system of health care; it allows maximum patient/physician contact with a minimum of administrative responsibilities. Our superior employment and benefits package make Air Force medicine an attractive alternative to private practice. Find out how you can be a part of the Air Force health care team. Without obligation, call

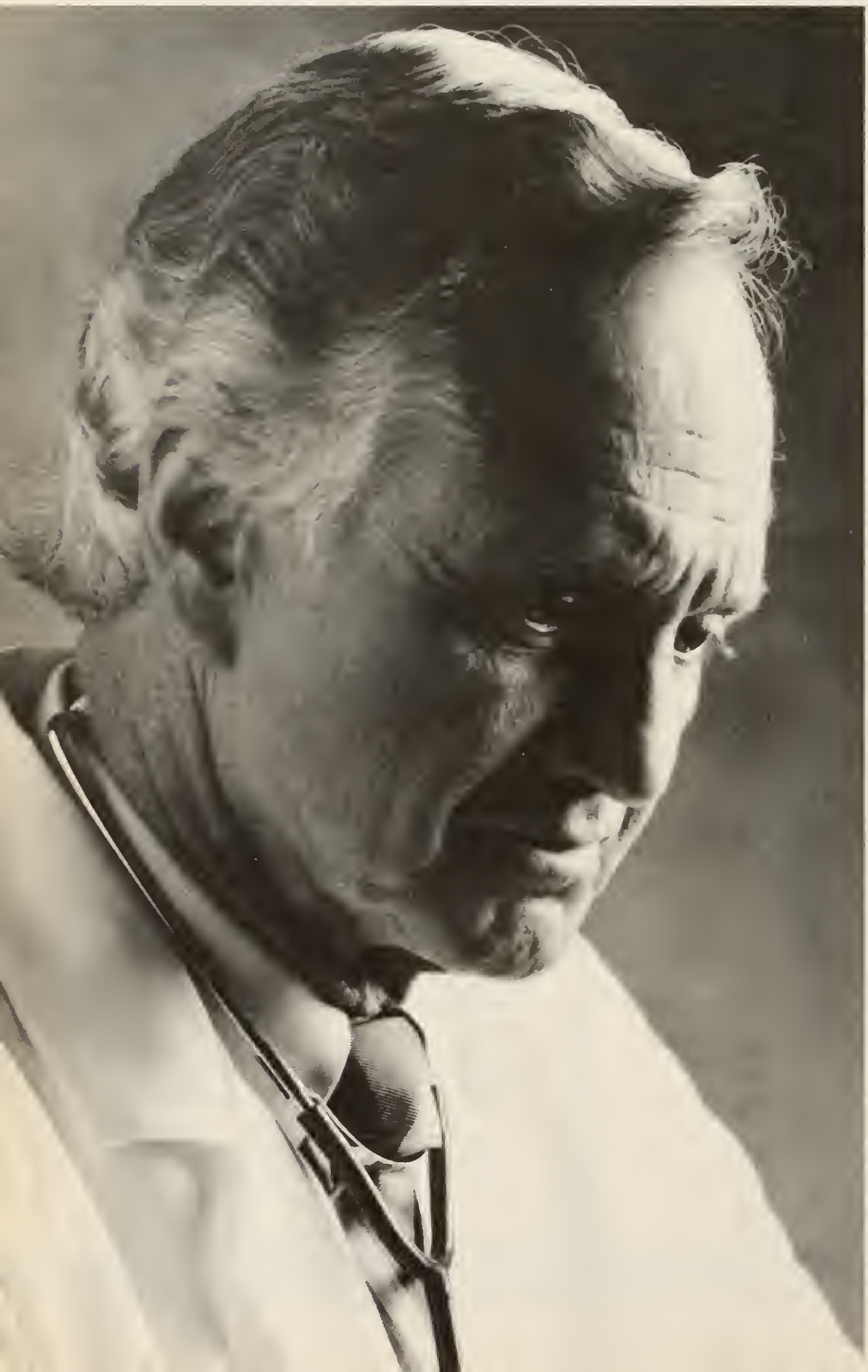
**CAPT LAMONT PACK
STATION TO STATION COLLECT
913-491-8640**

AIR FORCE

No Need to Feel Helpless...

Few things elicit feelings of depression, rage, helplessness and exasperation as thoroughly as receiving suit papers for a malpractice claim. This physician suffered just such an unpleasant experience... but his odds of winning were better than most. Why? Because his professional liability insurance carrier is Insurance Corporation of America.

The circumstances of this claim could occur and have occurred in operating rooms and doctors' offices everywhere. A routine surgical procedure went sour when, for no apparent reason, the patient suffered a cardiac arrest. Prompt and proper attempts at resuscitation failed. Our physician was sued along with other



surgeons in the operating room, the primary care physician, the anesthesiologist and the hospital.

Subsequent to surgery, it was determined the patient had arrested as a result of an allergic reaction to the anesthesia. Unlike other carriers involved, who settled quickly to avoid costly "death incident" litigation, ICA recognized our physician was not at fault. Fortunately for him, ICA is dedicated to the strongest claims defense possible. And because ICA also understands that a doctor's most valuable asset is his reputation, protecting it becomes *our* bottom line.

So ICA and the doctor fought alone — and at ICA's expense. ICA in-house attorneys screened and selected local defense attorneys skilled in malpractice cases and familiar with the judicial climate of the region. Then, they planned strategy, investigated the facts, and monitored the defense.

During discovery, information was released indicating the patient had previously undergone similar surgery under anesthesia *without* incident. Because of ICA's diligence and our willingness to exhaust all legal remedies, the jury was allowed to hear the autopsy report as well as the patient's past medical history. Those defendants who settled quickly never had an opportunity to present that evidence. And ultimately our insured was exonerated.

What does this mean to the doctor? He leaves the courtroom with his reputation, his policy limits and his checkbook intact, all because of his partnership with ICA, where we put reputation, principles and dignity ahead of the quick fix. The reason why? Because ICA is people who *care*. Period.

ICA **People Who Care**

INSURANCE CORPORATION OF AMERICA

Houston, Texas 713 (871-8100)

Three Vital Prescriptions For A Happy Retirement... All In One Comprehensive Program

The MSMA Retirement System

1 Pre-Retirement Planning

Through Prudential-Bache, MSMA provides a program for building and protecting your wealth. This program assesses your current financial condition and provides you with a coordinated plan to help you secure your financial goals.

2 Business & Retirement Planning

Through Prudential-Bache and Trust Consultants, MSMA provides a program with considerable benefits:

☐ Self-trusteeship of plans
☐ Fast, accurate plan design
☐ Complete administration
☐ Access to country's top money managers

3 Post-Retirement Planning

As you approach your well-earned retirement, your MSMA member benefit provides a decision-making tool, through Prudential-Bache, to coordinate a selection of settlement options and tax treatment for retirement plans. Estate planning is assessed when necessary.

Many MSMA members have already put the MSMA Retirement System to use. Why not you? The details are now available on audio tape. For your free copy, call us today or send in the coupon below.

MSMA Retirement System c/o Prudential-Bache Securities
231 S. Bemiston Ave., St. Louis, MO 63105
ATTN. Michael G. Grimes
314-721-9200, toll free **1-800-877-9200**

☐ Yes, send me a MSMA Retirement System audio tape today!

Name ____________ Address ____________

City ________ State ________ Zip ________ Phone ( )

Clients, please give name and office of Account Executive. ____________

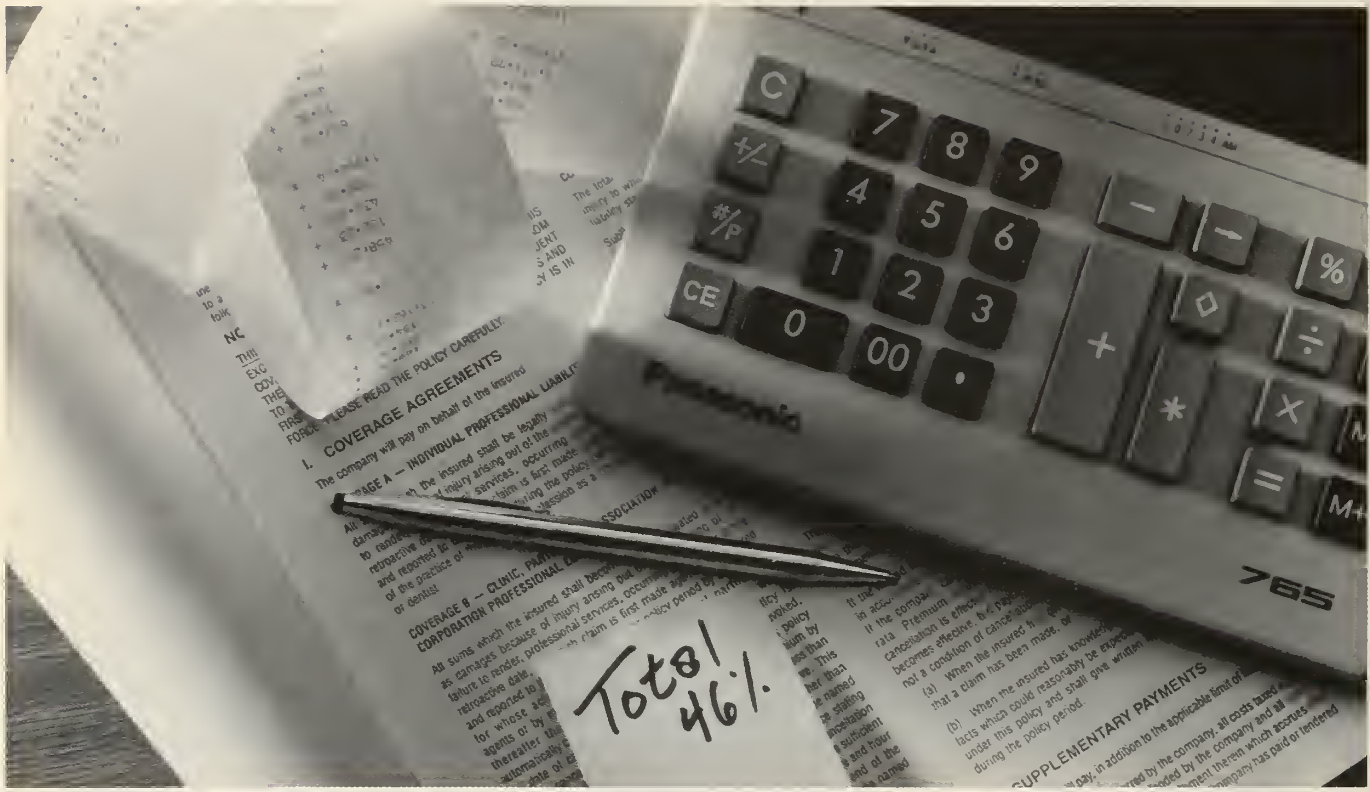
Missouri State Medical Association

© 1989 Prudential-Bache Securities. Member SIPC

Designated Specialty Codes

The following specialites are recognized by the American Medical Association.

A	Allergy
ABS	Abdominal Surgery
ADL	Adolescent Medicine
AI	Allergy and Immunology
AM	Aerospace Medicine
AN	Anesthesiology
BE	Broncho-Esophagology
BLB	Bloodbanking
CD	Cardiovascular Diseases
CDS	Cardiovascular Surgery
CHN	Child Neurology
CHP	Child Psychiatry
CLP	Clinical Pathology
CRS	Colon and Rectal Surgery
D	Dermatology
DIA	Diabetes
DMP	Dermatopathology
DR	Diagnostic Radiology
EM	Emergency Medicine
END	Endocrinology
FOP	Forensic Pathology
FP	Family Practice
GE	Gastroenterology
GER	Geriatrics
GP	General Practice
GPM	General Preventive Medicine
GS	General Surgery
GYN	Gynecology
HEM	Hematology
HNS	Head and Neck Surgery
HS	Hand Surgery
HYP	Hypnosis
ID	Infectious Diseases
IG	Immunology
IM	Internal Medicine
LAR	Laryngology
LM	Legal Medicine
MFS	Maxillofacial Surgery
N	Neurology
NA	Neuropathology
ND	Neoplastic Diseases
NEP	Nephrology
NM	Nuclear Medicine
NPM	Neonatal-Perinatal Medicine
NR	Nuclear Radiology
NS	Neurological Surgery
NTR	Nutrition
OBG	Obstetrics and Gynecology
OBS	Obstetrics
OM	Occupational Medicine
ON	Oncology
OPH	Ophthalmology
ORS	Orthopedic Surgery
OS	Other, i.e., physician designated a specialty other than appearing here.
OT	Otology
OTO	Otorhinolaryngology
P	Psychiatry
PA	Clinical Pharmacology
PD	Pediatrics
PDA	Pediatric Allergy
PDC	Pediatric Cardiology
PDE	Pediatric Endocrinology
PDR	Pediatric Radiology
PDS	Pediatric Surgery
PH	Public Health
PHO	Pediatric Hematology-Oncology
PM	Physical Medicine and Rehabilitation
PNP	Pediatric Nephrology
PS	Plastic Surgery
PSF	Facial Plastic Surgery
PTH	Pathology
PUD	Pulmonary Diseases
PYA	Psychoanalysis
PYM	Psychosomatic Medicine
R	Radiology
RHI	Rhinology
RHU	Rheumatology
RIP	Radioisotopic Radiology
TR	Therapeutic Radiology
TRS	Traumatic Surgery
TS	Thoracic Surgery
U	Urology
US	Urological Surgery
Note:	No code will appear for those physicians who have not designated a specialty.



Introducing Claims Paid Coverage From Risk Control Associates

Save Up to 46% on Your Premiums with Guaranteed Rates for 3 Years!

Cut Your Liability Insurance Costs Up to 46% With Our NEW Claims Paid Coverage. If you are tired of the high cost of Medical Liability Insurance, now there is something you can do about it. It's called **Claims Paid** coverage, and it can cut your premium costs up to 46%. **And we guarantee a level premium for 3 years if you join now!**

Claims Paid is a bold new concept in medical liability coverage. It offers the benefits of full protection at a fraction of the cost. Risk Control Associates is the only company to offer this innovative plan to the physicians and dentists of Missouri.

Our New Claims Paid Policy is Designed for Maximum Protection at a Much Lower Premium. Risk Control Associates can offer reduced premiums for **Claims Paid** policies because premiums are based on money actually paid out. And **Claims Paid** Insurance is available in the same coverage options as Occurrence and Claims Made policies.

If you are currently insured under one of our other policies, you can easily convert your coverage to **Claims Paid.**

Risk Control Associates is a Leader in Innovation and Services. Risk Control Associates is Missouri's leader in the Medical Liability Insurance field. We are owned and managed by physicians, so we know what is important to you. We understand your need for maximum protection and excellent service. And we deliver both. We are "Physicians Helping Physicians."

For more information about our new **Claims Paid** Policy, call for our free brochure, "Understanding Claims Paid Medical Liability Insurance" or ask to speak with a company representative. Our phone number is (800) 422-5122. We will be glad to answer any questions you may have.

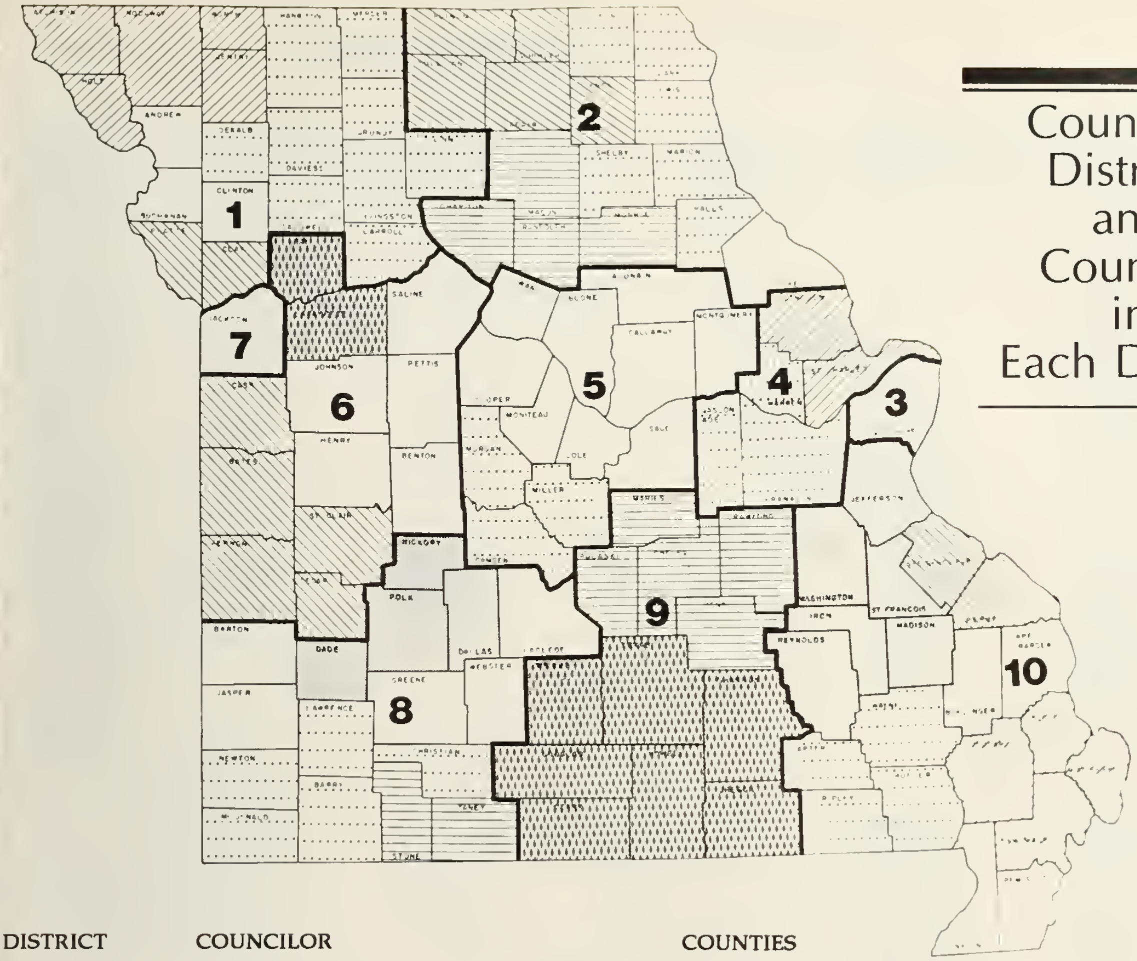
You can start saving up to 46% on your insurance premiums right away, **so contact us today.** It will mean significant savings to you and an excellent investment in your future.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS

Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

1111 S. Glenstone • Suite 3-102
Springfield, Missouri 65804
(800) 422-5122 • (417) 862-0650


1
2
3
4
5
6
7
8
9
10
CLINTON
DAVIESS
SHELBY
BOONE
CALLAWAY
MONTGOMERY
SALINE
JOHNSON
PETTIS
HENRY
BENTON
MONITEAU
MILLER
HICKORY
POLK
DADE
BARTON
JASPER
NEWTON
GREENE
CHRISTIAN
TANEY
STONE
WASHINGTON
IRON
REYNOLDS
ST FRANCOIS
MADISON
JEFFERSON

Councilor Districts and Counties in Each District

DISTRICT	COUNCILOR	COUNTIES
FIRST	Stephen Vilmer, M.D., *Shawnee Mission, KS*	Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, DeKalb, Gentry, Grundy, Harrison, Holt, Linn, Livingston, Mercer, Nodaway, Platte and Worth
SECOND	Robert V. Tompson, M.D., *Moberly*	
THIRD	William H. Huffaker, M.D., *St. Louis* J. Otto Lottes, M.D., *St. Louis* Arturo Montes, M.D., *Florissant* Frederick D. Peterson, M.D., *St. Louis* David Wilkinson, M.D., *St. Louis* Carol F. Williams, M.D., *St. Louis*	Adair, Chariton, Clark, Knox, Lewis, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby and Sullivan St. Louis County and City
FOURTH	J. Michael Conoyer, M.D., *St. Peters*	Franklin, Gasconade, Lincoln, St. Charles and Warren
FIFTH	Alan L. Braun, M.D., *Jefferson City* Jerry Murrell, M.D., *Columbia*	Audrain, Boone, Callaway, Camden, Cole, Cooper, Howard, Miller, Moniteau, Montgomery, Morgan and Osage*
SIXTH	A. J. Campbell, M.D., *Sedalia*	Bates, Benton,* Cass, Cedar, Henry, Johnson, Lafayette, Pettis, Ray, St. Clair, Saline and Vernon
SEVENTH	Frederick W. Hahn, M.D., *Kansas City* Robert T. Gibbons, Jr., M.D., *Overland Park, KS* Dorothy D. Reister, M.D., *Shawnee Mission, KS*	Jackson
EIGHTH	David W. Hall, M.D., *Rogersville* Duane Hellam, M.D., *Springfield*	Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, Laclede, McDonald, Newton, Polk, Stone, Taney and Webster
NINTH	David O. Barbe, M.D., *Mountain Grove*	Crawford, Dent, Douglas, Howell, Maries, Oregon, Ozark, Phelps, Pulaski, Shannon*Texas and Wright
TENTH	Melvin C. Kasten, M.D., *Cape Girardeau*	Bollinger, Butler, Cape Girardeau, Carter, Dunklin, Iron, Jefferson, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington and Wayne

---

* Counties with no medical organization.

Guide to Component Medical Societies

Following is a list of Missouri communities in which MSMA member-physicians are in active practice or reside. Name of the community is followed by the county in which it is located and the medical society to which physicians of that community normally would belong.

Town	County	Medical Society
	A	
Advance	Stoddard	SEMO
Affton	St. Louis	St. Louis Metropolitan
Albany	Gentry	Northwest Missouri
Altenburg	Perry	Perry-St. Genevieve
Appleton City	St. Clair	West Central
Arnold	Jefferson	Jefferson
Arrow Rock	Saline	Saline
Ashland	Boone	Boone
Augusta	St. Charles	St. Charles-Lincoln
Aurora	Lawrence	Ozarks
Ava	Douglas	South Central
	B	
Ballwin	St. Louis	St. Louis Metropolitan
Bethany	Harrison	Grand River
Blue Springs	Jackson	Jackson
Bolivar	Polk	Dallas-Hickory-Polk-Dade
Bonne Terre	St. Francois	Mineral Area
Boonville	Cooper	Boone
Branson	Taney	Tri-Lakes
Brentwood	St. Louis	St. Louis Metropolitan
Bridgeton	St. Louis	St. Louis Metropolitan
Brookfield	Linn	Grand River
Brunswick	Chariton	Chariton-Macon-Monroe-Randolph
Buffalo	Dallas	Dallas-Hickory-Polk-Dade
Butler	Bates	West Central
	C	
Cabool	Texas	South Central
Cainsville	Harrison	Grand River
California	Moniteau	Cole
Camdenton	Camden	Lake of the Ozarks
Cape Girardeau	Cape Girardeau	Cape Girardeau
Cardwell	Dunklin	Dunklin
Carrollton	Carroll	Grand River
Carthage	Jasper	Jasper
Caruthersville	Pemiscot	Pemiscot
Cassville	Barry	Ozarks
Centralia	Boone	Boone
Charlack	St. Louis	St. Louis Metropolitan
Charleston	Mississippi	SEMO
Chesterfield	St. Louis	St. Louis Metropolitan
Chillicothe	Livingston	Grand River
Clayton	St. Louis	St. Louis Metropolitan
Climax Springs	Camden	Lake of the Ozarks
Clinton	Henry	Henry
Columbia	Boone	Boone
Concordia	Lafayette	Lafayette-Ray
Crestwood	St. Louis	St. Louis Metropolitan
Creve Coeur	St. Louis	St. Louis Metropolitan

Town	Country	Medical Society
	C	
Crystal City	Jefferson	Jefferson
Cuba	Crawford	Mid-Missouri
	D	
Deepwater	Henry	Henry
Desloge	St. Francois	Mineral Area
DeSoto	Jefferson	Jefferson
Dexter	Stoddard	SEMO
Doniphan	Ripley	Butler-Wayne-Ripley-Carter
	E	
East Prairie	Mississippi	SEMO
Edina	Knox	North Central
Eldon	Miller	Lake of the Ozarks
El Dorado Springs	Cedar	West Central
Ellington	Reynolds	Mineral Area
Ellisville	St. Louis	St. Louis Metropolitan
Elsberry	Lincoln	St. Charles-Lincoln
Eureka	St. Louis	St. Louis Metropolitan
Excelsior Springs	Clay	Clay-Platte
	F	
Fairdealing	Ripley	Butler-Wayne-Ripley-Carter
Fairfax	Atchison	Northwest Missouri
Farber	Audrain	Audrain
Farmington	St. Francois	Mineral Area
Fayette	Howard	Howard
Fenton	St. Louis	St. Louis Metropolitan
Ferguson	St. Louis	St. Louis Metropolitan
Festus	Jefferson	Jefferson
Flat River	St. Francois	Mineral Area
Florissant	St. Louis	St. Louis Metropolitan
Fordland	Webster	Webster
Forsyth	Taney	Tri-Lakes
Fort Leonard Wood	Pulaski	Mid-Missouri
Fredericktown	Madison	Mineral Area
Frontenac	St. Louis	St. Louis Metropolitan
Fulton	Callaway	Callaway
	G	
Galena	Jackson	Jackson
Gallatin	Daviess	Grand River
Gladstone	Clay	Clay-Platte
Glasgow	Howard	Boone
Glendale	St. Louis	St. Louis Metropolitan
Grandview	Jackson	Jackson
Grant City	Worth	Northwest
Greenwood	Jackson	Jackson

Town	County	Medical Society
H		
Hamilton	Caldwell	Grand River
Hannibal	Marion	Northeast
Harrisburg	Boone	Boone
Harrisonville	Cass	West Central
Hartsburg	Boone	Boone
Hayti	Pemiscot	Pemiscot
Hazelwood	St. Louis	St. Louis Metropolitan
Herculaneum	Jefferson	Jefferson
Hermann	Gasconade	Franklin-Gasconade-Warren
Higginsville	Lafayette	Lafayette-Ray
High Ridge	St. Louis	St. Louis Metropolitan
Hillsboro	Jefferson	Jefferson
Holden	Johnson	Johnson
Holts Summit	Callaway	Callaway
Hornersville	Dunklin	Dunklin
House Springs	St. Louis	St. Louis Metropolitan
Houston	Texas	South Central
Huntsville	Randolph	Chariton-Macon-Monroe-Randolph
I		
Independence	Jackson	Jackson
Ironton	Iron	Mineral Area
J		
Jackson	Cape Girardea	Cape Girardeau
Jefferson City	Cole	Cole
Joplin	Jasper	Jasper
K		
Kansas City	Jackson	Jackson
Kennett	Dunklin	Dunklin
Kimberling City	Stone	Tri-Lakes
Kirksville	Adair	North Central
Kirkwood	St. Louis	St. Louis Metropolitan
Knob Noster	Johnson	Johnson
L		
LaGrange	Lewis	Northeast
Lamar	Barton	Barton
Lebanon	Laclede	Laclede
Lee's Summit	Jackson	Jackson
Lemay	St. Louis	St. Louis Metropolitan
Lexington	Lafayette	Lafayette-Ray
Liberty	Clay	Clay-Platte
Linn	Osage	Cole
Louisiana	Pike	Pike
Lutesville	Bollinger	Mineral Area
M		
Macon	Macon	Chariton-Macon-Monroe-Randolph
Malden	Dunklin	Dunklin
Manchester	St. Louis	St. Louis Metropolitan
Mansfield	Wright	South Central
Maplewood	St. Louis	St. Louis Metropolitan
Marceline	Linn	Grand River
Marionville	Lawrence	Ozarks

Town	County	Medical Society
M		
Marshall	Saline	Saline
Marshfield	Webster	Webster
Marthasville	Warren	Franklin-Gasconade-Warren
Maryland Heights	St. Louis	St. Louis Metropolitan
Maryville	Nodaway	Northwest Missouri
Mexico	Audrain	Audrain
Moberly	Randolph	Chariton-Macon-Monroe-Randolph
Monett	Barry	Ozarks
Monroe City	Monroe	Chariton-Macon-Monroe-Randolph
Mound City	Holt	Northwest Missouri
Mount Vernon	Lawrence	Ozarks
Mountain Grove	Wright	South Central
N		
Neosho	Newton	Ozarks
Nevada	Vernon	West Central
New Haven	Franklin	Franklin-Gasconade-Warren
New London	Ralls	Northeast
Nixa	Christian	Ozarks
Normandy	St. Louis	St. Louis Metropolitan
North Kansas City	Clay	Clay-Platte
O		
Oak Grove	Jackson	Jackson
Odessa	Lafayette	Lafayette-Ray
O'Fallon	St. Charles	St. Charles-Lincoln
Osage Beach	Camden	Lake of the Ozarks
Osceola	St. Clair	West Central
Overland	St. Louis	St. Louis Metropolitan
Owensville	Gasconade	Franklin-Gasconade-Warren
P		
Pacific	Franklin	Franklin-Gasconade-Warren
Palmyra	Marion	Northeast
Paris	Monroe	Chariton-Macon-Monroe-Randolph
Parkville	Platte	Clay-Platte
Perryville	Perry	Perry-Ste. Genevieve
Pierce City	Lawrence	Ozarks
Platte City	Platte	Clay-Platte
Plattsburg	Clinton	Clinton
Pleasant Hill	Cass	West Central
Poplar Bluff	Butler	Butler-Wayne-Ripley-Carter
Portageville	New Madrid	SEMO
Potosi	Washington	Mineral Area
Puxico	Stoddard	SEMO
R		
Raymore	Cass	West Central
Raytown	Jackson	Jackson
Reeds Spring	Stone	Tri-Lakes
Republic	Greene	Greene
Richland	Pulaski	Mid-Missouri
Richmond	Ray	Lafayette-Ray
Richmond Heights	St. Louis	St. Louis Metropolitan
Rocheport	Boone	Boone
Rock Port	Atchison	Northwest
Rogersville	Webster	Webster
Rolla	Phelps	Mid-Missouri
Rosendale	Andrew	Andrew

Town	County	Medical Society
	S	
St. Ann	St. Louis	St. Louis Metropolitan
St. Charles	St. Charles	St. Charles-Lincoln
St. Clair	Franklin	Franklin-Gasconade-Warren
Ste. Genevieve	Ste. Genevieve	Perry-Ste. Genevieve
St. Joseph	Buchanan	Buchanan
St. Louis	St. Louis	St. Louis Metropolitan
St. Peters	St. Charles	St. Charles-Lincoln
Salem	Dent	Mid-Missouri
Sarcoxie	Jasper	Jasper
Savannah	Andrew	Andrew
Sedalia	Pettis	Pettis
Shelbina	Shelby	Northeast
Shell Knob	Barry	Ozarks
Shrewsbury	St. Louis	St. Louis Metropolitan
Sikeston	Scott	SEMO
Slater	Saline	Saline
Smithton	Pettis	Pettis
Smithville	Clay	Clay-Platte
Springfield	Greene	Greene
Stanberry	Gentry	Northwest
Steelville	Crawford	Mid-Missouri
Stafford	Greene	Greene
Sullivan	Franklin	Franklin-Gasconade-Warren
Sweet Springs	Saline	Saline
	T	
Tarkio	Atchison	Northwest
Thayer	Oregon	South Central
Town and Country	St. Louis	St. Louis
Trenton	Grundy	Grand River
Troy	Lincoln	St. Charles-Lincoln
	U	
Union	Franklin	Franklin-Gasconade-Warren
University City	St. Louis	St. Louis Metropolitan
	V	
Valley Park	St. Louis	St. Louis Metropolitan
Van Buren	Carter	Butler-Wayne-Ripley-Carter
Versailles	Morgan	Lake of the Ozarks
	W	
Warrensburg	Johnson	Johnson
Warrenton	Warren	Franklin-Gasconade-Warren
Washington	Franklin	Franklin-Gasconade-Warren
Waverly	Lafayette	Lafayette-Ray
Waynesville	Pulaski	Mid-Missouri
Webb City	Jasper	Jasper
Webster Groves	St. Louis	St. Louis Metropolitan
Wellsville	Montgomery	Montgomery
Wentzville	St. Charles	St. Charles-Lincoln
Weston	Platte	Clay-Platte
West Plains	Howell	South Central
Williamsville	Wayne	Butler-Wayne-Ripley-Carter
Willow Springs	Howell	South Central
Winchester	St. Louis	St. Louis Metropolitan
Windsor	Henry	Henry
Winston	Daviess	Grand River

Professional help for health professionals.

Substance abuse is a growing problem among health professionals. At Timberlawn Psychiatric Hospital, a special program exists to help health professionals overcome substance abuse problems.

A range of treatment options, individual and group therapy programs, and other recovery-oriented services are all geared toward the unique needs of the health professional. An individualized evaluation leads to selection of the most appropriate treatment program, which is further enhanced by specialized aftercare and monitoring services. Treatment team members include Board Certified psychiatrists, clinical psychologists, psychiatric social workers and substance abuse counselor specialists with certification in their field.

At Timberlawn, we understand the unique challenges faced by health professionals today, and we're here to help. For more details on our facility or referral arrangements, contact: Dr. Edgar P. Nace, Chief of Substance Abuse Services.

TIMBERLAWN
PSYCHIATRIC HOSPITAL
PROFESSIONALS HELPING PROFESSIONALS

4600 Samuell Blvd. • P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958 • 1-800-426-4944

Why does
JACKSON &
COKER
recruit more physicians each year than any other company?

- ☐ Largest pool of available physicians in the nation
- ☐ Network of 7 regional offices nationwide
- ☐ Expertise that produces unparalleled results in recruiting quality physicians
- ☐ Proven system that produced over 1,000 placements in the last 3 years.

JACKSON AND COKER

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

Most patients need only one.

K-DUR™ 20 Microburst Release System™
(potassium chloride) 20mEq Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System™
(potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1 For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2 For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3 The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g , spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g , spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest

Treatment measures for hyperkalemia include the following

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2 Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3 Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity

I002004

13944326
Rev 4/87

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ ____________

Date of Birth ____________

Smoker/Non-Smoker (circle one)

Name ____________

Address ____________

City/State ____________

Zip ____________ Phone ____________

SPECIAL ARTICLE

Physician's Charity Care Program

Gary A. Dyer, M.D.
St. Joseph, Missouri

The MSMA Physician's Charity Care Program will recognize those member and non-member M.D. and D.O. physicians who give annually 50 hours or more of hands-on charity medical care to the poor in Missouri. All able-bodied, licensed, practicing physicians are encouraged to get involved.

The MSMA House of Delegates, at its 131st annual convention, unanimously adopted 50 hours per year of "hands-on" charity medical care as the desired level of giving by each able-bodied, licensed, practicing physician in the state of Missouri.

The resolution, as adopted, states:

> RESOLVED, that the Missouri State Medical Association adopted 50 hours per year (approximately one hour per week) of hands-on charity medical care for the poor, by each physician, as the desirable level of giving, and be it further
> RESOLVED, that each physician be encouraged to record (in hours rather than dollars) the amount of charity care given, and submit the total annually to the MSMA, and be it further
> RESOLVED, that charity care for the poor and indigent include those totally without funds (welfare patients) and Medicaid patients (only on that portion uncompensated by the State of Missouri), and be it further
> RESOLVED, that MSMA recognize in Missouri Medicine, and by other suitable means, those physicians giving 50 or more hours of charity care per year, and be it further
> RESOLVED, that MSMA use the accumulated data to tastefully state to the Missouri General Assembly and other interested parties that Missouri physicians *do* give their fair share of charity care, and be it further
> RESOLVED, that MSMA encourage the Missouri General Assembly to develop solutions for the problems of the poor, so that the number is reduced, and that poverty does not become a way of life for successive generations of Missouri families, and be it finally
> RESOLVED, that this resolution be introduced at the AMA level for consideration as the position of the AMA and all U.S. physicians.

If this program is successful, the following goals will be met: Most Missouri physicians will give 50 hours or more of hands-on charity medical care per year; indigent and Medicaid patients will receive physician care; participating physicians will receive proper recognition; and the General Assembly and the general public will be

Month:______________________________ MSMA Physician's Charity Care Program Worksheet

Date	INDIGENT ENCOUNTERS			
	O.V.	Cons.	Surg.	Hours
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
Total				
	A	B	C	D

Date	MEDICAID ENCOUNTERS			
	O.V.	Cons.	Surg.	Hours
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
Total				
	E	F	G	H

Total Number of Indigent Patient Encounters:__________ A+B+C

Hours of Charity Care:______________ D

Total Number of Medicaid Patient Encounters:________ E+F+G

Total Hours of Care:____ H x 0.66* = Hours of Charity Care:__________

If another percentage would better reflect your hours of uncompensated care, please use it.

Note: If your practice does not consist of office visits, consultations and surgery, please use other headings.

Fig 1. Sample worksheet for computing hours of uncompensated care.

made aware of this gift, and public relations will improve.

The key points of the program are:

1. Hands-on medical care is required.
2. Indigent care and uncompensated Medicaid care are included.
3. Member and non-member M.D. and D.O. physicians participate.
4. Fifty hours of care per year is the desired level of giving.
5. Participation is voluntary.
6. It is an honor system.
7. Care is recorded in hours.
8. Yearly totals are submitted to MSMA.
9. MSMA uses data totals in the best interest of physicians.

Many physicians will realize that they have been participating in such a program for years, but their hours of care have not been tabulated, and recognition, other than personal satisfaction or thanks from a grateful patient, has not been received. Certainly, the General Assembly of Missouri and the general public seem unaware of the many hours of charity care given by Missouri physicians.

Charity care, as defined for this program, includes hands-on medical care rendered in any practice setting, to indigent patients (those without funds), Medicaid patients, or both. Professional courtesy, bad debt cases, and Medicare patients are not included. Activities of a medical nature that are not strictly "hands-on" are also not included; examples include driving time, journal reading about a case, telephone calls, and letter-writing.

Physicians directly supervising patient care by residents, interns, or students are giving hands-on care. The residents and interns are also giving hands-on care. Physicians who personally study tissues, x-ray films, or scans from such patients and render diagnoses are providing hands-on care.

The program is completely voluntary, and is in reality an honor system much like the CME program of the MSMA and AMA. It is open to member and non-member physicians, both M.D. and D.O. Each physician is asked to develop a simple system for recording their hours of hands-on charity care and then send in the total number of hours each year to the MSMA. It is suggested that one clerical staff person in each office be given the responsibility for keeping the record so that little of the physician's personal time is required after the initial system is set up.

Care rendered is to be recorded in hours rather than dollars, on an hour-for-hour basis, with allowances for Medicaid partial reimbursement. In the office setting, hours of care for indigent patients can be determined by the following formula:

$$\frac{\text{No. of indigent patients seen}}{\text{Average no. of patients seen/hour}} = \text{Hours of care}$$

Medicaid, in general, reimburses physicians for about one-third of actual charges. For some codes, the amount may be less, and for others, the proportion may approach 50%. If one-third is taken as the average, then two-thirds of Medicaid care is uncompensated, and may be used in the following formula:

$$\frac{\text{No. of indigent patients seen}}{\text{Average no. of patients seen/hour}} \times 2/3 = \text{Hours of care}$$

Consultations, surgical care, and nursing home care would be recorded on an hour-for-hour basis with subtractions for Medicaid partial reimbursement. Recording the data on a daily basis would give the greatest accuracy. A sample worksheet for recording the data is provided (Figs 1 and 2).

The Missouri State Medical Association will recognize physicians who give 50 hours or more of hands-on charity medical care by publishing their names in Missouri Medicine, in a manner similar to the recognition given recipients of the Physician's Recognition Award for continuing medical education. Other possible methods of recognition will be studied.

Provided a large number of physicians accumulate the data and turn in their hours, MSMA will use the data when working with the Missouri General Assembly. At the June 1989 AMA annual convention, the Missouri delegation introduced a resolution which has the same framework as this proposal. The resolution was referred for further study to the AMA Board of Trustees for consideration as policy for all U.S. physicians.

The poor will always be with us, and the medical profession has always taken the responsibility for caring for the poor, regardless of ability to pay. The original code of ethics of the AMA, written in 1846, stated, "To individuals in indigent circumstances, professional services should be cheerfully and freely accorded." Ideally, however, we would like to see the charity patient pool in Missouri decrease rather than continually increase. Successive generations of families in poverty surely must, over time, reduce the vitality of our state. We should encourage the General Assembly and other interested groups to develop innovative ways of getting individuals and families out of the poverty groove and

DAILY DATA SHEET

Date: ____________ Weather: ____________

Employees Present: ____________ Employees Absent: ____________

PATIENTS SEEN: ____________

OFFICE TOTAL: ________ A.M. ______ P.M. ______
Medicare: ________
Medicaid: ________ $ ______
Indigent: ________ $ ______
Referral: ________
Walk-in: ________
New: ________
New Prob: ________
Follow-up ________
NAC/PC: ________
Cancel: ________
DNKA: ________

Surgery: ________
Medicare: ______
Medicaid: ______ $ ______
Indigent: ______ $ ______

Consults: ________
Medicare: ______
Medicaid: ______ $ ______
Indigent: ______ $ ______

PEG-BOARD DATA: ________
Charges: ________
Payments: ________
Accts. Rec.: ________
Bad Checks: ________

MEETINGS: ____________

COMMENTS: ____________

Fig 2. Sample sheet for use in physician's office on a daily basis.

into a productive way of life. They must become educated, trained and employed. This will best put them in a position to provide for their own medical care.

You are encouraged to support the MSMA Physician Charity Care Program. Please take the time today to initiate a simple system in your office for recording your hours of charity care so that a total may be submitted to the MSMA at year's end. Please take the time tomorrow to explain the program to a colleague and encourage him or her to support it as well. If you have any questions about the program, please contact the MSMA staff.

The Author

GARY A. DYER, M.D.

Dr. Dyer is president-elect of the Missouri State Medical Association. He is in the private practice of dermatology in St. Joseph.

Reprints

Gary A. Dyer, M.D.
Private Practice of Dermatology and Dermatopathology
1325 Village Drive
St. Joseph, Missouri 64506

PROGRESS NOTES

The newsletter of the Missouri State Medical Association

Coming to your mailbox in August.

Missouri Medicine will never be the same.

MSMA Committees and Commissions

Executive Committee

Marvin A. Singleton, M.D., *Chairman*	Joplin
Gary A. Dyer, M.D.	St. Joseph
Norman P. Knowlton, III, M.D.	Springfield
Harry O. Cole, M.D.	Chesterfield
Dorothy D. Reister, M.D.	Shawnee Mission, KS
Carol F. Williams, M.D.	St. Louis

Judicial Council

E. T. Hansbrough, M.D., *Chairman*	Poplar Bluff (1991)
Walter A. German, M.D.	Springfield (1994)
Ronald A. Youmans, M.D.	Kansas City (1992)
Hugh E. Stephenson, Jr., M.D.	Columbia (1990)
Richard V. Bradley, M.D.	St. Louis (1993)

Constitution and Bylaws Committee

E. Richard Graviss, M.D., *Chairman,*	St. Louis (1991)
Douglas B. Bogart, M.D.	Kansas City (1991)
Paul B. Anderson, M.D.	Neosho (1992)
Sivaprasad D. Madduri, M.D.	Poplar Bluff (1990)
Jagadishwar Devkota, M.D.	Columbia (1990)

Planning Committee

Phillip M. Hornbostel, M.D., *Chairman*	Sedalia (1992)
Charles E. DeFelice, M.D.	Cape Girardeau (1994)
Victoria Gunn, M.D.	Jefferson City (1994)
Carl Kruse, M.D.	Palmyra (1992)
Sam L. Farrell, M.D.	Washington (1993)
Stephen C. McCray, M.D.	Gladstone (1993)
Dan T. Sullivan, M.D.	Springfield (1991)
Bruce Preston, M.D.	West Plains (1991)
Robert R. MacDonald, Jr., M.D.	St. Louis (1990)
Douglas Paone, M.D.	Kansas City (1990)

Legislative Affairs Committee

John I. Matthews, M.D., *Chairman*	Jefferson City
Marvin A. Singleton, M.D.	Joplin
Gary A. Dyer, M.D.	St. Joseph
Dorothy D. Reister, M.D.	Shawnee Mission, KS
Norman P. Knowlton, III, M.D.	Springfield
Melvin C. Kasten, M.D.	Cape Girardeau
Jerry Murrell, M.D.	Columbia
Michael L. Craighead, M.D.	Jefferson City
Harry L. Knopf, M.D.	St. Louis
Frederick W. Hahn, M.D.	Independence
Daniel F. O'Sullivan, M.D.	St. Louis
Mrs. Charles Barbee, Auxiliary	Columbia
Mrs. Robert Wankum, Auxiliary	Jefferson City
Mrs. Tom Sparkman, Auxiliary	Cape Girardeau

Physician's Health Committee

Carl Pearman, M.D., *Chairman*	Springfield (1990)
Thomas M. Ahmann, M.D.	Mexico (1992)
Donald McIntosh, M.D.	Lee's Summit (1992)
David S. Martin, M.D.	Chesterfield (1992)
Thomas R. Anderson, M.D.	Columbia (1992)
Hugh C. Bartlett, M.D.	Rolla (1991)
Jo-Ellyn Ryall, M.D.	St. Louis (1991)
Edward M. Grim, M.D.	Joplin (1991)
John P. Carmody, M.D.	St. Louis (1990)
James R. Criscione, Jr., M.D.	Kirkwood (1990)
Edward C. Felker, III, M.D.	Sikeston (1990)
K. P. S. Kamath, M.D.	Cape Girardeau (1990)

Continuing Education and Health Manpower Commission

John H. Renner, M.D., *Chairman*	Independence (1992)
James S. Denninghoff, M.D.	Columbia (1992)
Michael W. Vannier, M.D.	St. Louis (1992)
Robert B. Brigden, M.D.	Joplin (1992)
Nancy H. Ceaser, M.D.	Springfield (1992)
William D. Bradshaw, M.D.	Kansas City (1991)
Gerald J. Duling, M.D.	St. Charles (1991)
Harry Miller, M.D.	Clinton (1991)
Gerald Bart, M.D.	St. Louis (1991)
Purificacion Florendo, M.D.	Hannibal (1991)
Turner L. Minnigerode, M.D.	Kansas City (1990)
Dwight L. Deardeuff, M.D.	Rolla (1990)
George X. Trimble, M.D.	Kansas City (1990)
Michael R. Freeman, M.D.	Cape Girardeau (1990)
Raymond O. Frederick, M.D.	St. Louis (1990)
David O. Barbe, M.D., *Councilor Advisor*	Mountain Grove (1990)

Medical Economics, Third Party Medicine and Governmental Relations Commission

Milamari A. Cunningham, M.D., *Chairman*	Columbia (1992)
Joe Pryor, M.D.	Joplin (1992)
Ronald N. Riner, M.D.	St. Louis (1992)
Frederick G. DeFeo, M.D.	Kansas City (1992)
J. Gustavo Nix, M.D.	Bolivar (1992)
Charles W. Chastain, M.D.	Flat River (1991)
Nicholas F. Robinson, M.D.	Kennett (1991)
Melvin R. Hayden, M.D.	Camdenton (1991)
John D. Davidson, M.D.	Chesterfield (1991)
James J. Bass, M.D.	Rolla (1991)
Carl Strauss, M.D.	Kansas City (1990)
Martha Reed, M.D.	Hillsboro (1990)
F. David Muegge, M.D.	Springfield (1990)
Lewis C. Vollmar, Jr., M.D.	St. Louis (1990)
Clarence C. Reynolds, M.D.	Jefferson City (1990)
William Huffaker, M.D., *Councilor Advisor*	Maryland Heights (1990)

Interspecialty Medicine Commission

J. Regan Thomas, M.D., Chairman *Otolaryngology*	St. Louis
Michael Loren, M.D., *Allergy*	Independence
James Alyea, M.D, *Anesthesiology*	Columbia
Michael L. Weaver, M.D. *Emergency Physicians*	Kansas City
Ray Lyle, M.D. , *Family Physicians*	Versailles
Paul E. Stohr, M.D., *Neurosurgery*	St. Louis
John J. Purcell, Jr., M.D. *Ophthalmology*	St. Louis
Fred G. McQueary, M.D. *Orthopaedics*	Springfield
David Scrivner, M.D., *Pathology*	Chesterfield
David Simon, M.D., *Pediatrics*	St. Louis
Clifford Ameduri, M.D. *Physical Medicine & Rehabilitation*	Springfield
Bharat R. Nakra, M.D. *Psychiatry*	St. Louis
Richard Heimburger, M.D., *Plastic & Reconstructive Surgery*	Columbia
Julian N. Verde, M.D., *Radiology*	St. Louis
Michael Bukstein, M.D., *Surgery (Missouri)*	Hannibal
Michael J. Chehval, M.D., *Urology*	St. Louis
Gregory J. Renner, M.D. , *Surgery (American College)*	Columbia
Robert T. Gibbons, Jr., M.D. , *Councilor Advisor*	Overland Park, KS

Publications Committee

Donald G. Sessions, M.D., *Chairman*	St. Louis
Ramona M. Chapman, M.D., *Vice-Chairman*	Joplin
Jack J. Curtis, M.D.	Columbia
John S. Daniels, M.D.	St. Louis
Stephen Hamburger, M.D.	Shawnee Mission, KS

Medical-Legal Affairs Commission

Edmond B. Cabbabe, M.D., *Chairman*	Maryland Heights (1992)
Ralph Braunschweig, M.D.	Columbia (1992)
Michael K. Blank, M.D.	DeSoto (1992)
Edward F. Schlafly, Jr., M.D.	Chesterfield (1992)
Paul Quinn, M.D.	Springfield (1992)
Chris K. Fotopolous, M.D.	Osage Beach (1991)
Mario Coronado, M.D.	St. Louis (1991)
Joseph A. Corrado, M.D.	Mexico (1991)
Nancy Abdon, M.D.	Kansas City (1991)
Richard J. Gimpelson, M.D.	Chesterfield (1991)
Michael D. DePriest, M.D.	St. Joseph (1990)
William E. Stricker, M.D.	Rolla (1990)
Andrew B. Kaufman, M.D.	Kansas City (1990)
Thomas C. Sparkman, M.D.	Cape Girardeau (1990)
Curtis C. Cox, M.D.	Jefferson City (1990)
Stephen Vilmer, M.D., *Councilor Advisor*	Shawnee Mission, KS (1990)

Public Affairs Commission

Keith A. LaFerriere, M.D., *Chairman*	Springfield (1992)
Gerald B. Lee, M.D.	Kansas City, KS (1992)
Marla J. Tobin, M.D.	Higginsville (1992)
Ravinder Mehra, Jr., M.D.	St. Louis (1992)
Stanley G. Hall, M.D.	Hannibal (1992)
Barry J. Bass, M.D.	Rolla (1991)
Jo-Ellyn M. Ryall, M.D.	St. Louis (1991)
Joe E. Belew, M.D.	Chesterfield (1991)
Carl Doerhoff, M.D.	Jefferson City (1991)
Warren C. Lovinger, Jr., M.D.	Nevada (1991)
R. Robert Hatlelid, M.D.	Joplin (1990)
Lawrence A. Rues, M.D.	Kansas City (1990)
Robert J. Olson, M.D.	Springfield (1990)
Robert P. Wankum, M.D.	Jefferson City (1990)
Michaele M. Penkoske, M.D.	St. Charles (1990)
David W. Hall, M.D. , *Councilor Advisor*	Rogersville (1990)

Directory of Medical Specialty Organizations

Any specialty group not listed here is invited to send the name of the group's president and the time, date and place of the group's next meeting to: Medical Specialty Listing, MISSOURI MEDICINE, P.O. Box 1028, Jefferson City, MO 65102.

** The 132nd MSMA Annual Convention will be held April 5-8, 1990 at Tan-Tar-A, Lake Ozark.*

Specialty	President	Next Meeting
Missouri State Allergy Association	Rand E. Dankner, M.D. 1570 Woodlake Dr. Chesterfield, MO 63017	*MSMA Annual Convention, Lake Ozark
Missouri Society of Anesthesiologists	Robert N. Miller, M.D. 551 High Meadows Rd. St. Louis, MO 63131	*MSMA Annual Convention, Lake Ozark
Missouri Dermatological Society, Inc.	Joseph Werth, M.D. 1233 Jefferson St. Jefferson City, MO 65101	*MSMA Annual Convention, Lake Ozark
Missouri Chapter American College of Emergency Physicians	Dean Nierling, M.D. 2015 N. Dearborn Columbia, MO 65203	August 2, 1989 Tan-Tar-A, Lake Ozark
Missouri Academy of Family Physicians	Patrick B. Harr, M.D. 114 E. South Hills Dr. Maryville, MO 64468	June 14-17, 1990 Tan-Tar-A, Lake Ozark
Missouri Society of Internal Medicine	John Layle, M.D. 212 Medical Plaza 4320 Wornall Rd. Kansas City, MO 64110	Oct. 6-9, 1989 Lodge of the Four Seasons, Lake Ozark
Missouri State Neurosurgical Society	C. Keith Whittaker, M.D. 4440 Broadway Kansas City, MO 64111	*MSMA Annual Convention, Lake Ozark
Missouri OB/GYN Society	George J. Fuchs, M.D. 201 W. Brandon Rd. Columbia, MO 65203	Sept. 1989 Columbia

Missouri Ophthalmological Society	John J. Purcell, M.D. 6400 Clayton Rd. Ste. 416 St. Louis, MO 63117	Jan. 1990 Capitol Plaza Hotel, Jefferson City
Missouri State Orthopaedic Association	Michael Trueblood, M.D. 48 Doctors Park Cape Girardeau, MO 63701	To be announced
Missouri Society of Otolaryngology	Charles M. Luetje, III, M.D. 3100 Braodway, Ste. 509 Kansas City, MO 64111	Oct. 14, 1989 Capitol Plaza Hotel, Jefferson City
Missouri Society of Pathologists	H. Neil Grannemann, M.D. 1000 W. 10th St. Rolla, MO 65401-2905	*MSMA Annual Convention Lake Ozark
Missouri Chapter, American Academy of Pediatrics	Nirmil Mitra, M.D. 11201 Colorado Kansas City, MO 64137-2597	November 1989 Children's Mercy Hosp., Kansas City
Missouri Association of Plastic & Reconstructive Surgeons	Richard Heimburger, M.D. 1504 E. Broadway Columbia, MO 65201	*MSMA Annual Convention, Lake Ozark
Missouri Psychiatric Association	Bharat Nakra, M.D. 1221 S. Grand St. Louis, MO 63104	*MSMA Annual Convention, Lake Ozark
Central Society of Physical Medicine & Rehabilitation	*information not available at press time*	
Missouri Radiology Society	*information not available at press time*	
Missouri Chapter of American College of Surgeons	John P. Christy, M.D. 686 Lester St. Poplar Bluff, MO 63901	June 22-24, 1990 The Lodge of the Four Seasons, Lake Ozark
Missouri State Surgical Society	Mary Helikson, M.D. N307A Health Science Ctr. Columbia, MO 65212	*MSMA Annual Convention, Lake Ozark
Missouri Thoracic Society	Robert Bruce, M.D. Ste. 16413, Barnes Hosp. Plaza St. Louis, MO 63110-1013	To be announced
Missouri Society of Urologists	Michael J. Chehval, M.D. 641 S. New Ballas Rd. St. Louis, MO 63141	To be announced

Metropolitan Specialty Organizations

Listed here are medical specialty groups located in Missouri's metropolitan areas. The listings are organized by city with the name of the current president or contact person, their address and phone number plus the organization's meeting schedule, if available at press time. Please note that any organization not listed below may submit their standard information for publication to: Metropolitan Specialty Organizations, MISSOURI MEDICINE, P.O. Box 1028, Jefferson City, MO 65102.

Columbia

Mid-Missouri Pathology Society
Ann Havey, M.D., contact person
Health Sciences Center
Columbia, MO 65212
314/882-8154
Meeting dates to be announced

Central Missouri Psychiatric Society
Roy Wilson, M.D., president
Department of Psychiatry
3 Hospital Drive
Columbia, MO 65201
314/449-2511
Meeting dates to be announced

American College of International Physicians (Missouri Chapter)
Arshad Husain, president
N119 Health Sciences Center
Columbia, MO 65212
314/882-8006
Meeting dates to be announced

Kansas City

Greater Kansas City Allergy Association
Charles J. Siegel, M.D., president
6000 N. Oak, Suite 102
Kansas City, MO 64118
816/453-7771
Meetings are quarterly

Kansas City Society of Anesthesiologists
Kirk T. Benson, M.D., president
Kansas University Medical Center
39th & Rainbow Blvd.
Kansas City, MO 66103
913-588-6670
Meets five times a year

Kansas City Dermatologic Society
Mark A. McCune, M.D., president
10600 Quivira, Suite 430
Overland Park, KS 66215
913/541-3230
Meets 3rd Thursdays except July & December

Kansas City Academy of Family Physicians
Lawrence A. Rues, M.D., president
Goppert Family Care Center
6601 Rockhill Road
Kansas City, MO 64131
816/276-7600
Meets quarterly

Kansas City Gynecological Society
Darryl Wallace, M.D., president
St. Luke's Hospital
44th & Wornall Road
Kansas City, MO 64111
816/932-2026
Meets 3rd Thursday every other month

Greater Kansas City Society of Internists
Lawrence E. Koppers, M.D., president
4320 Wornall Road, Suite 55
Kansas City, MO 64111
816/561-6464
Meets in Feb., Apr., Sept., Nov.

Great Plains Occupational Medical Association
Carolyn Parsons, M.D., President
10640 W. 87th St.
Overland Park, KS 66214
913/894-6600
Meets as called

Kansas City Orthopedic Society
Larry Cordell, M.D., president
6420 Prospect, Suite T207
Kansas City, MO 64132
816/444-9000
Meets twice a year

Kansas City Society of Ophthalmology & Otolaryngology
D. W. Bell, M.D., president
4601 W. 109th St., Suite 116
Shawnee Mission, KS 66211
913/491-6550
Meetings are quarterly

Kansas City Society of Pathologists
Kenneth Watson, D.O., president
St. Luke's Hospital
44th & Wornall Rd.

Kansas City, MO 64111
816/932-2000
Meets 1st Wednesday Sept. - May

Greater Kansas City Pediatric Society
Antoni M. Diehl, M.D., president
4320 Wornall Road, Suite 348
Kansas City, MO 64111
816/753-4414
Meets monthly on 4th Wednesday

Western Missouri Psychiatric Society
Donald D. Simmons, M.D., president
2900 Baltimore, Suite 3880
Kansas City, MO 64108
816/753-1468
Meets quarterly

Greater Kansas City Radiological Society
James K. Fisher, M.D., president
4320 Wornall Road, Suite 710
Kansas City, MO 64111
816/531-9481
Meets 2nd Wednesdays, Oct. & Nov., Jan. - Apr.

Kansas City Surgical Society
Edward E. Haith, M.D., president
6724 Troost, Suite 410
Kansas City, MO 64131
816/333-9500
Meets 3rd Wednesday January, March, May, November

Kansas City Urological Society
Robert L. Elkins, M.D., president
6650 Troost, Suite 206
Kansas City, MO 64131
816/333-0500
Meets monthly except summer and December

St. Louis

St. Louis Society of Anesthesiologists
Robert Feinstein, M.D., president
12623 Talow Lane
St. Louis, MO 63146
Meeting dates to be announced

St. Louis Cardiac Club
George Williams, M.D., president
10928 Hillcrest Rd.
Kansas City, MO 64134
Meeting dates to be announced

St. Louis Society of Colon and Rectal Surgery
Francis Burns, M.D., president
6400 Clayton Rd.
St. Louis, MO 63117
Meeting dates to be announced

St. Louis Dermatological Society
Stephen J. Vitale, M.D., president
14377 Woodlake Dr., #108
Chesterfield, MO 63107
Meeting dates to be announced

The St. Louis Ear, Nose and Throat Club
William Freidman, M.D., president
1325 S. Grand Blvd., 2nd Floor
St. Louis, MO 63104
Meeting dates to be announced

St. Louis Academy of Family Physicians
L. Joseph Kennington, M.D., president
14382 Woodlake Dr.
Chesterfield, MO 63107
Meeting dates to be announced

St. Louis Gastrointestinal Endoscopy Society
Burton A. Shatz, M.D., president
10287 Clayton Rd.
St. Louis, MO 63124
Meeting dates to be announced

St. Louis Gynecological Society
Fernando Arias, M.D., president
621 S. New Ballas Rd.
St. Louis, MO 63141
Meeting dates to be announced

St. Louis Society of Internal Medicine
William A. Peck, M.D., president
216 S. Kingshighway
St. Louis, MO 63110
Meeting dates to be announced

St. Louis Internists' Club
William G. Bowen, M.D., president
4652 Maryland Ave.
St. Louis, MO 63108
Meeting dates to be announced

St. Louis Society of Medical Oncology
Burton M. Needles, M.D., president
12255 DePaul Dr., Ste. 190
Bridgeton, MO 63044
Meeting dates to be announced

St. Louis Society for Neurological Sciences
James Ferrendelli, M.D., president
517 S. Euclid Ave.
St. Louis, MO 63110
Meeting dates to be announced

St. Louis Ophthalmolgoical Society
Jerome Basinki, M.D., president
4900 W. Main St.
Belleville, IL 62223
Meeting dates to be announced

St. Louis Academy of Ophthalmology
Samuel A. Canaan, Jr., M.D., president
5505 Delmar Blvd.
St. Louis, MO 63112
314/367-7077
Meeting dates to be announced

St. Louis Orthopedic Society
Lee Skimming, M.D., president
621 S. New Ballas, Ste. 43
St. Louis, MO 63141
Meeting dates to be announced

St. Louis Pathological Society
Daniel Santa Cruz, M.D., president
615 S. New Ballas Rd.
St. Louis, MO 63141
Meeting dates to be announced

St. Louis Pediatric Society
Warren J. Wimmer, M.D., president
3220 Parker Rd.
Florissant, MO 63033
Meeting dates to be announced

St. Louis Society of Physical Medicine & Rehabilitation
Otakar Machek, M.D., president
6744 Clayton Rd., #316
St. Louis, MO 63117
Meeting dates to be announced

St. Louis Area Society of Plastic Surgeons
William B. Webber, M.D., president
6400 Clayton, #110
St. Louis, MO 63117
Meeting dates to be announced

Eastern Missouri Psychiatric Society
Raj Nakra, M.D., president
4949 Barnes Hospital Plaza, 16428
St. Louis, MO 63110
Meeting dates to be announced

Greater St. Louis Society of Radiologists
Jonathan D. Dehner, M.D., president
26 Lorenzo Lane la Due
St. Louis, MO 63124
Meeting dates to be announced

St. Louis Rheumatism Society
Terry Weiss, M.D., president
522 N. New Ballas Rd., #240
St. Louis, MO 63141
Meeting dates to be announced

St. Louis Surgical Society
Charles B. Anderson, M.D., president
6343 Alexander Dr.
St. Louis, MO 63105
Meeting dates to be announced

St. Louis Thoracic Surgical Society
Donald Judd, M.D., president
6125 Clayton Ave., #208
St. Louis, MO 63139
Meeting dates to be announced

St. Louis Urological Society
Michael J. Chehval, M.D., president
621 S. New Ballas Rd., #362
St. Louis, MO 63141
Meeting dates to be announced

Gateway Vascular Society
Falls B. Hershey, M.D., president
621 S. New Ballas Rd., #307
St. Louis, MO 63141
Meeting dates to be announced

Insurance Plans Available to MSMA Members

Type of Coverage	*Underwriter*	*Administrator*
Professional Liability Insurance. Claim coverage available from $200,000/$600,000 to $2/$4 million. Endorsed by MSMA. Premises liability also available.	MOMEDICO (Missouri Medical Insurance Company)	MOMEDICO 10795 Watson Road St. Louis, MO 63127 1/800-392-8039
Personal Disability Income. Benefits available up to $6,000 per month. Lifetime accident/to age 65 sickness coverage. Residual disability benefit available with cost of living increase provision. An individual contract with special renewal guarantees.	Commercial Insurance Company of Newark, N.J.	Fred S. James & Co. of Missouri, Inc. 2420 Pershing Road Kansas City, MO 64108 816-842-6670, 1-800-892-7105 231 S. Bemiston - Suite 1000 Clayton, MO 63105 314-863-7777, 1-800-445-9513
Overhead Expense Insurance. Benefits up to $10,000 per month. Optional 15 day or 30 day waiting periods after which payment begins from first day of disability and continues up to 2 years.	Commerical Insurance Company of Newark, N.J.	Fred S. James & Co. of Missouri, Inc. (see above)
Accidental Death and Dismemberment. Up to $200,000 coverage. May include spouse, children and employees.	Commerical Insurance Company of Newark, N.J.	Fred S. James & Co. of Missouri, Inc. (see above)
Hospital Indemnity Plan. $50 to $200 per day while hospitalized in addition to any other insurance. Family coverage available.	Commerical Insurance Company of Newark, N.J.	Fred S. James & Co. of Missouri, Inc. (see above)
Term Life Plan. Members and employees under age 60 may enroll for amounts up to $250,000. Spouses coverage, one half amount of member or employee, up to $100,000. Dependent children may be insured for $2,500.	Mutual Life Insurance Company of New York	Forrest T. Jones & Co., Inc. 3130 Broadway P.O. Box 418131 Kansas City, MO 64141 1-800-892-7272
Major Medical Plan. Pays up to a lifetime of $1,000,000. Deductibles from $200-$1,000. Coverage available to members, employees and dependents. Extremely low cost policy.	Mutual Life Insurance Company of New York	Forrest T. Jones & Co., Inc. 3130 Broadway P.O. Box 418131 Kansas City, MO 64141 1-800-892-7272
Workers' Compensation Insurance. A dividend program which returns premiums as earned each year, based on cost of claims from all participating physicians. The dividends often run between 30-40% per year.	Casualty Reciprocal Exchange, Member of Dodson Insurance Group	Dodson Insurance Group 92nd and State Line Kansas City, MO 64114 1-800-825-3760
MSMA Retirement System. A program covering pre-retirement, financial & business retirement planning, post-retirement financial planning.	Prudential-Bache Securities	Prudential-Bache Securities 231 S. Bemiston Ave. St. Louis, MO 63105 1/800-877-9200 in St. Louis 721-9200

Missouri Volunteer Health Agencies

Patients of MSMA members are eligible, in some instances, to receive assistance from various volunteer health agencies in the state. Assistance may be in the form of free or subsidized, specialized care, or information.

In an effort to assist MSMA members in attaining assistance for their patients, the following list of Missouri volunteer health agencies has been compiled. In some cases, a statewide organization is listed. In instances in which an organization is limited to a certain portion of the state, several organizations may be listed under one heading.

Arthritis

Arthritis Foundation, Eastern Missouri Chapter
7315 Manchester, St. Louis 63143
314-644-3488

Arthritis Foundation, Western Missouri-Greater Kansas City Chapter
8301 State Line, Suite 200, Kansas City 64114
816-361-7002

Arthritis Institute of Greater Kansas City
6601 Rockhill Rd., Kansas City 64131
816-444-5899

Asthma and Allergy

Asthma and Allergy Foundation of America, St. Louis Chapter
6611 Clayton Rd., Ste. 103, St. Louis 63117
314-726-6866

Birth Defects

March of Dimes, Northern Missouri Chapter
1310 Business 63 South, Columbia 65201
314-449-0573

Blood Transfusion and Tissue Bank

Missouri/Illinois Regional Blood Services
4050 Lindell, St. Louis 63108
314-658-2000

Cancer

American Cancer Society, Missouri Division, Inc.
P.O. Box 1066, 3322 American Ave., Jefferson City 65102
314-893-4800 or 1-800-ACS-2345

Missouri Cancer Information Service
Boone Hospital Center
1600 East Broadway, Columbia 65201
1-800-4-CANCER
314-875-3506 in Columbia

Cerebral Palsy

United Cerebral Palsy Association of Missouri
925 South Country Club Drive, Suite A-1
Jefferson City 65109
314-893-5454

Cystic Fibrosis

Cystic Fibrosis Foundation, Gateway Chapter
7730 Carondelet, St. Louis 63105
314-721-2490

Cystic Fibrosis Foundation, Heart of America Chapter
8080 Ward Parkway, #250, Kansas City 64114
816-363-5636

Diabetes

American Diabetes Association, Columbia Region
206 Austin, P.O. Box 11
Columbia 65205
314-443-8611

American Diabetes Association, Heart of America Region
9201 Ward Parkway, Kansas City 64114
816-361-3361

American Diabetes Association, Missouri Affiliate, Inc.
213 Adams, Suite 201, Jefferson City 65101
314-636-5552

American Diabetes Association, Ozark Region
Cox Medical Center North
1423 North Jefferson, J-200
Springfield 65802
417-864-5091

American Diabetes Association
Missouri Affiliate Inc./St. Louis Region
1780 S. Brentwood Blvd.
St. Louis 63144
314-968-3196

Disabled Children and Adults

Missouri Easter Seal Society, Inc.
1982 Concourse, Ste. 100, St. Louis 63146
314-569-0822

Epilepsy

Epilepsy Federation, St. Louis Region
7305 Manchester, St. Louis 63143
314-645-6969

Epilepsy

Greater Kansas City Epilepsy League
4949 Rockhill Rd., Kansas City 64110
816-276-8940

Heart

American Heart Association, Missouri Affiliate, Inc.
P.O. Box Q, 105 E. Ash, Suite 2, Columbia 65205
314-442-3193 or 1-800/323-7883

Hemophilia

Bi-State Hemophilia Association
3127 A South Grant, St. Louis 63118
314-771-6080

Kidney

National Kidney Foundation of Eastern Missouri and Metro East, Inc.
1139 Olivette Executive Park, St. Louis 63132
1-800-727-0240 or 314-993-4363

National Kidney Foundation of Kansas and Western Missouri
One East 34th St., Kansas City 64111
816-756-2002

Lungs

American Lung Association, Springfield Branch
1835 S. Stewart, Springfield 65804
417-883-7177

American Lung Association, Central Missouri Branch
P.O. Box 1321, Columbia 65205
314-874-2616

American Lung Association of Eastern Missouri
1118 Hampton Ave., St. Louis 63139-3196
314-645-5505

American Lung Association of Western Missouri
2007 Broadway, Kansas City 64108
816-842-5242

American Lung Association, Southeast Missouri Branch
908 Themis, Cape Girardeau 63701
314-334-4007

Multiple Sclerosis

Multiple Sclerosis Society, Gateway Area Chapter
915 Olive St., Suite 815, St. Louis 63101
314-241-8285

Multiple Sclerosis Society, Mid-America Chapter
P.O. Box 2292, Shawnee Mission, KS 66201
1-800-346-3026 ext. 271
913-432-3926

Multiple Sclerosis Society, Mid-Missouri Branch
1206 Business Loop 70 West, Suite E, Columbia 65201
314-875-6767

Multiple Sclerosis Society, St. Joseph Branch
Heartland Hospital West, St. Joseph 64504
816-364-6290

Multiple Sclerosis Society, Ozark Branch
2149 S. Oak Grove, Springfield 65804
417-882-8128

Muscular Dystrophy

Muscular Dystrophy Association, Central Missouri Chapter
914 North College, Suite 2, Columbia 65201
314-442-5154

Muscular Dystrophy Association, Inc.
3910 Old Highway 94 S., St. Charles 63303-6752
314-928-9911

Muscular Dystrophy Association, Inc., Greater Ozarks Chapter
435 S. Union, Suite K, Springfield 65802-2657
417-866-5117

Muscular Dystrophy Association, Inc., Missouri Valley Chapter
301 E. Armour, Suite 305, Kansas City 64111
816-931-7750

Muscular Dystrophy Association, Inc., Mississippi Valley Chapter
1023 S. Big Bend Blvd., St. Louis 63117
314-644-2828

Muscular Dystrophy Association, Twin Rivers Chapter
354 Silver Springs Road, Cape Girardeau 63701
314-335-4400

Myasthenia Gravis

Myasthenia Gravis Foundation, Inc., Greater Kansas City Chapter
4949 Rockhill Rd., Kansas City 64110
816-276-8310
Also, contact your local Muscular Dystrophy office.

Neurofibromatosis

The National Neurofibromatosis Foundation, Inc., Missouri Chapter
14753 Dovershire Ct., Chesterfield 63017
314-391-7872

Red Cross

American Red Cross, Greater Kansas City Chapter
211 W. Armour, Kansas City 64111
816-932-6000

Red Cross

American Red Cross, Missouri/Illinois Regional Blood Services
4050 Lindell Blvd., St. Louis 63108
314-658-2000

Retarded Citizens

Barry-Lawrence ARC
P.O. Box 244, Monett 65708
417-235-3596

Clay-Platte ARC
7211 N. Broadway, Kansas City 64118
816-436-1704

Gentry County ARC
P.O. Box 219, Albany 64402
816-726-4155

Greene County Association for Retarded Children, Inc.
Activities Ctr., 1501 East Pythian, Springfield 65802
417-864-7887

Joplin Area ARC
1718 Garrison, Carthage 64836
417-358-2980

St. Charles County ARC
P.O. Box 9634, 613 Westridge Dr., O'Fallon 63366
314-281-1903

Stoddard County ARC
Rt. 2, Box 11, Dexter 63841
314-624-8525

Sudden Infant Death Syndrome

SIDS Research
929 DeMun, St. Louis 63105
1-800-421-3511
314-862-3033 in St. Louis

The Dodson Dividend Plan

A program for workers' compensation insurance that gives you the opportunity to earn a dividend at the end of your policy year, depending on claim experience.

Our Plan has been approved by the Missouri State Medical Association since 1983.

Insured MSMA members have received dividends as high as **35%**. Returns of premium now average **16.22%** per year.

With returns like these, shouldn't you insure with Dodson, too?

1-800-825-3760
Ext. 2990

underwritten by
Casualty Reciprocal
Exchange, member

DODSON GROUP
9201 State Line Road
Kansas City, MO 64114

Medical Coverage Exclusively For Medical Professionals & Their Employees

That says it all. The MSMA $1,000,000 Major Medical Plan is specifically designed to meet the needs of today's physician . . .

- $1,000,000 lifetime maximum
- Your choice of $200, $500 or $1,000 deductible
- Coverage for a lifetime
- Affordable group rates

Most doctors don't need expensive "first dollar" medical coverage. But when those hospital costs start adding up, you do need to be sure you have a solid plan that stands behind you and your family.

Administered by:

Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

Insured by:

The Mutual Life Insurance
of New York

CALL NOW!

National:
800-821-7303

Missouri:
800-892-7272

Kansas City:
816-756-1060

ASK FOR JAN PACEY

Clip the coupon and send it in for a free brochure.
MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on the MSMA $1,000,000 Major Medical Plan.

Name ______________________________

Address ______________________________

City ______________________________

State ______________________ Zip ______________

Your Directory

Most regular features of Missouri Medicine have been eliminated for this issue only to focus on information used daily by Missouri physicians. Reviewing the Contents page, you will see the following information included in this issue. We have listed a brief explanation of each section here:

MSMA Officers, AMA Delegates and Alternates, MSMA Councilors and Vice Councilors —This photo feature helps you to identify the leaders and representatives of MSMA.

Code Number for Component Medical Societies —Every MSMA member is listed in two rosters in this issue: alphabetically and by component medical society. In the alphabetical listing, the number following the physician's name corresponds with the numerical heading where the second listing is found. For example, a physician practicing in Columbia would have the code 026 following his alphabetical listing to show that he is featured in the Boone County listing in the second roster section. This code number chart also shows the page number of each component medical society section.

Designated Specialty Codes —These abbreviations follow a physician's name to show the medical specialty.

Councilor Districts and Counties in Each District —The map shows the geographical divisions for each MSMA Councilor District. The names of the Councilors for those districts and the counties in their area are listed.

Guide to Component Medical Societies —An alphabetical list of Missouri communities and their corresponding component medical society.

MSMA Committee and Commissions — A listing of the members of each committee and commission for 1989-90.

Directory of Medical Specialty Organizations — A list of each state specialty organization, the president's name and address, and meeting information, if available.

Director of Metropolitan Specialty Organizations — A list of each metropolitan specialty organization, the president's name and address, and meeting information, if available.

Insurance Plans Available to MSMA Members — Type of coverage, underwriter and administrator is listed for each plan.

Missouri Volunteer Health Agencies — These groups provide assistance in the form of free or specialized equipment, rehabilitation training, counseling, specialized care, or information. These are listed for members' referral purposes.

Alphabetical Roster — All members are listed by their last name followed by the code number and the name of their component medical society.

Component Society Roster — Sectioned according to component medical society, the physician's name, address, telephone number and medical specialty code appear here.

Component Society Executives — A listing of the directors of each component society with a full-time staff, along with the address and phone number of the society's office. ■

Component Society Executives

Gordon R. Garrett, Ed.D.
Executive Vice President
St. Louis Metropolitan Medical Society
3839 Lindell Blvd.
St. Louis, MO 63108

Ron Cosens
Executive Director
Metropolitan Medical Society
of Greater Kansas City
3036 Gillham Road
Kansas City, MO 64108
816/531-8432

James E. Thompson, Jr.
Executive Director
Greene County Medical Society
1200 E. Woodhurst,Bldg. D-200
Springfield, MO 65804
417/887-1017

Lee Gibson
Executive Director
Boone County Medical Society
2401 Bernadette, Suite 204
Columbia, MO 65203
314/445-6444

Lois Frenz
Executive Director
Cape Girardeau County Area Medical Society
1005 N. Kingshighway
Cape Girardeau, MO 63701
314/334-5691

Rose Koeppen
Executive Director
Buchanan County Medical Society
Heartland Centre
701 Faraon
St. Joseph, MO 64501
816/271-7517

Judy Miller
Executive Director
Jasper County Medical Society
P.O. Box 2424
Joplin, MO 64803
417/624-3920

Alphabetical Roster of Members

Including name and code number of each member's component medical society.

A

Aaron, Geo	METRO MED	125
Abada, Eleanor S	ST. LOUIS METROP.	190
Abada, Roland	ST. LOUIS METROP.	190
Abadir, Rushdy	BOONE	026
Abbott, David A	ST. LOUIS METROP.	190
Abdel-Salam, Ahmed S	D-H-P-D	066
Abdou, Nancy L	METRO MED	125
Abel, Charles C	ST. LOUIS METROP.	190
Abel, Oliver	ST. LOUIS METROP.	190
Abelardo, Miguel I	ST. LOUIS METROP.	190
Abele, Wm A	BOONE	026
Abella, Ben Zulueta Z	METRO MED	125
Abend, Melvin N	METRO MED	125
Abercrombie, Keith J	METRO MED	125
Abernathie, Dennis L	BOONE	026
Abinoja, Conrado B	ST. LOUIS METROP.	190
Abodeely, Daniel A	ST. LOUIS METROP.	190
Abrams, Bernard M	METRO MED	125
Abrams, Morris	ST. LOUIS METROP.	190
Abu Dalu, Ziad	ST. LOUIS METROP.	190
Abu-Libdeh, Ali J	JASPER	102
Accardo, Pasquale J	ST. LOUIS METROP.	190
Aceto, Thomas	ST. LOUIS METROP.	190
Ackerman, Lauren	ST. LOUIS METROP.	190
Acuff, Robert P	BUCHANAN	030
Adams, Allen G	ST. LOUIS METROP.	190
Adams, Mark A	SEMO	202
Adams, Riley R	CAPE GIRARDEAU	042
Adams, Robert B	JASPER	102
Adelman, Arthur	METRO MED	125
Adelman, Bruce T	METRO MED	125
Adelmann, Eugene	ST. LOUIS METROP.	190
Adler, Benard C	ST. LOUIS METROP.	190
Adler, Federico	METRO MED	125
Aff-Drum, Helen	ST. LOUIS METROP.	190
Afuwape, Emanuel A	ST. LOUIS METROP.	190
Agasino, Gaudencio L	F-G-W	074
Agee, L. Glenn	METRO MED	125
Aguinaldo, Jaime A	ST. LOUIS METROP.	190
Ahad, Khandaker A	C-M-M-R	046
Ahadi, Abd U	ST. LOUIS METROP.	190
Ahern, Archibald M	ST. LOUIS METROP.	190
Ahlering, George H	ST. LOUIS METROP.	190
Ahlering, George P	ST. LOUIS METROP.	190
Ahlschier, Allan D	NORTHWEST	158
Ahlum, Sandra J	NORTHEAST	150
Ahlvin, Robt C	SEMO	202
Ahmad, Aqeeb	ST. LOUIS METROP.	190
Ahmad, Bashir	ST. LOUIS METROP.	190
Ahmad, Naseer	ST. LOUIS METROP.	190
Ahmad, Nusrat J	ST. LOUIS METROP.	190
Ahmann, Thomas M	AUDRAIN	014
Ahuja, Suraj P	METRO MED	125
Ailor, Edgar I	BOONE	026
Aitken, Louis F	ST. LOUIS METROP.	190
Ajans, Zaki A	AUDRAIN	014
Akbarnia, Behrooz A	ST. LOUIS METROP.	190
Aker, Umit T	ST. LOUIS METROP.	190
Akin, C. David	METRO MED	125
Al-Aly, Robert M	ST. LOUIS METROP.	190
Al-Basha, Imad M	BOONE	026
Al-Shathir, Saad	JASPER	102
Albani, Frank J	CLAY-PLATTE	050
Albani, Lawrence A	CLAY-PLATTE	050
Albanna, Faisal J	ST. LOUIS METROP.	190
Albano, Benj I	JEFFERSON	106
Albera, Victor H	ST. LOUIS METROP.	190
Alberg, Marvin R	METRO MED	125
Albert, I. Renee	ST. LOUIS METROP.	190
Albus, Thomas E	ST. LOUIS METROP.	190
Alcancia, Elpidio Y	GREENE	082
Alderman, Donald P	METRO MED	125
Aldridge, George A	B-W-R-C	034
Alegre, Jorge M	ST. LOUIS METROP.	190
Aleksander, Bernardo G	ST. LOUIS METROP.	190
Alex, Morris	ST. LOUIS METROP.	190
Alexander, George K	ST. LOUIS METROP.	190
Alfie, Salomon	METRO MED	125
Ali, Mohammed E	METRO MED	125
Ali, Syed S	ST. LOUIS METROP.	190
Allain, James J	CLAY-PLATTE	050
Allan, James R	CLAY-PLATTE	050
Allan, James E	COLE	058
Allbee, Roger H	JEFFERSON	106
Allcorn, Donald K	PETTIS	178
Allebach, Hobart K	METRO MED	125
Allego, Melquiadito M	PERRY-STE GENEVIEVE	174
Allen, Arthur A II	METRO MED	125
Allen, Brent T	ST. LOUIS METROP.	190
Allen, David O	JASPER	102
Allen, James H	ST. LOUIS METROP.	190
Allen, Jerry H	GREENE	082
Allen, Jerry H	F-G-W	074
Allen, Louis A	CLAY-PLATTE	050
Allen, Mark J	METRO MED	125
Allen, Melvin A	ST. LOUIS METROP.	190
Allen, Robert W	BOONE	026
Allen, Robt E	METRO MED	125
Allen, Thomas P	METRO MED	125
Allen, Willard M	ST. LOUIS METROP.	190
Allen, William Corwin	BOONE	026
Allen, Wm C	BOONE	026
Allison, James B	GREENE	082
Allphin, Barbara J	METRO MED	125
Almiron, Osias A	ST. LOUIS METROP.	190
Almuttar, Wasif F	NORTHWEST	158
Alonso, J. Mario Jr.	ST. LOUIS METROP.	190
Alonso-Yague, Pascual	ST. LOUIS METROP.	190
Alsop, Webb S Jr.	METRO MED	125
Altepeter, H. Martin	ST. LOUIS METROP.	190
Altman, Martin P	ST CHARLES-LINCOLN	189
Altomare, Edward P	METRO MED	125
Alul, Mohammad Ali H	ST CHARLES-LINCOLN	189
Alvarez, Ulises C	ST. LOUIS METROP.	190
Alyea, James O	BOONE	026
Amanat, Ebrahim	ST. LOUIS METROP.	190
Amato, Maryellen	ST. LOUIS METROP.	190
Ameduri, Clifford J	GREENE	082
Ames, Mary B	METRO MED	125
Ames, William H	BUCHANAN	030
Amin, Nalini	ST. LOUIS METROP.	190
Amin, Navin J	ST. LOUIS METROP.	190
Amini, Jafar	METRO MED	125
Amjad, Mohammad T	ST. LOUIS METROP.	190
Ammatelli, Francis J	METRO MED	125
Amoury, Raymond A	METRO MED	125
Amromin, George D	BOONE	026
Ancheta, Apolinario A	GREENE	082
Andersen, David A	ST. LOUIS METROP.	190
Anderson, Charles B	ST. LOUIS METROP.	190
Anderson, Daphne W	BOONE	026
Anderson, Dixie J	ST. LOUIS METROP.	190
Anderson, Douglas A	GREENE	082
Anderson, Frank K	ST CHARLES-LINCOLN	189
Anderson, Ivan A	BOONE	026
Anderson, John V	METRO MED	125
Anderson, Lynn A	GREENE	082
Anderson, Mark D	BOONE	026
Anderson, Paul B	OZARKS	166
Anderson, Philip C	BOONE	026
Anderson, Raymond B	METRO MED	125
Anderson, Sue K	METRO MED	125
Anderson, Thos R	BOONE	026
Andes, Elizabeth A	METRO MED	125
Andres, Edward H	BUCHANAN	030
Andrews, Elizabeth J	GREENE	082
Andrews, Paul E	GREENE	082
Andrus, Bailey C	METRO MED	125
Andrus, Charles H	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Andrus, Don L	B-W-R-C	034
Anglo, Luis B	ST. LOUIS METROP.	190
Ansbacher, Linda E	BOONE	026
Anslinger, David L	ST. LOUIS METROP.	190
Anstey, Geo C	ST. LOUIS METROP.	190
Anstey, John T	ST. LOUIS METROP.	190
Anthony, Dallas D	GREENE	082
Anthony, James P	METRO MED	125
Anthony, Lyndon U	ST. LOUIS METROP.	190
Apostol, Andres G	OZARKS	166
Applewhite, Thomas A	ST. LOUIS METROP.	190
Apprill, Phillip G	ST. LOUIS METROP.	190
Apte, Sunil M	F-G-W	074
Arbab, Ali A	METRO MED	125
Archer, Carol R	ST. LOUIS METROP.	190
Arenos, Proceso T	ST. LOUIS METROP.	190
Arias, Fernando	ST. LOUIS METROP.	190
Arms, Arnold V	METRO MED	125
Arms, Richard A	METRO MED	125
Armstrong, Jay H	CLAY-PLATTE	050
Armstrong, Stephen D	GREENE	082
Arneson, Axel N	ST. LOUIS METROP.	190
Arney, Wm G	ST. LOUIS METROP.	190
Arnold, Herbert M	BARTON	018
Arnold, John D	METRO MED	125
Arnold, Kenneth J	ST. LOUIS METROP.	190
Arnold, Lowry K	METRO MED	125
Arnold, Paul N	GREENE	082
Arnold, Richard C	BOONE	026
Arnot, John P	ST. LOUIS METROP.	190
Aronberg, Jerome M	ST. LOUIS METROP.	190
Arribas, Aurora I	METRO MED	125
Arribas, Neva P	ST. LOUIS METROP.	190
Arribas, Romeo F	METRO MED	125
Arrighi, David A	METRO MED	125
Arst, Herbert E	CLAY-PLATTE	050
Arthaud, J B	BOONE	026
Arthur, Gerald L	BOONE	026
Asaro, Phillip V	ST. LOUIS METROP.	190
Asel, Norman D	BOONE	026
Ash, Charles J	GREENE	082
Ashby, Jennifer D	METRO MED	125
Ashby, Richard	ST. LOUIS METROP.	190
Ashcraft, Keith W	METRO MED	125
Ashcraft, Walter C	JEFFERSON	106
Asher, Irving M	BOONE	026
*Asher, Kennett D	CAPE GIRARDEAU	042
Ashley, Lillard G Jr.	METRO MED	125
Ashley, Michael E	GREENE	082
Ashley, Thos E	GREENE	082
Askew, John H	SEMO	202
Atkinson, Lance D	GREENE	082
Atwell, Floyd C	METRO MED	125
Aubuchon, Craig E	ST. LOUIS METROP.	190
Auclair, Ronald J	ST. LOUIS METROP.	190
Auer, Arthur I	ST. LOUIS METROP.	190
Aufderheide, G. Russell	ST. LOUIS METROP.	190
Augustin, Cesar	ST. LOUIS METROP.	190
Aulenbacher, Carl E	F-G-W	074
Auner, Cecil K	GREENE	082
Auner, J. David	MINERAL AREA	138
Austin, George M	METRO MED	125
Austin, James L	BOONE	026
Averill, Keith H	METRO MED	125
Avery, David M	GREENE	082
Avila, Estrella Z	NORTHEAST	150
Avins, Laurence R	ST. LOUIS METROP.	190
Avioli, Louis V	ST. LOUIS METROP.	190
Axness, Mark E	GREENE	082
Ayata, Sedat M	ST. LOUIS METROP.	190
Aydt, Sarah A	CAPE GIRARDEAU	042
Aykent, Yavuz	ST. LOUIS METROP.	190
Aylward, Howard J Jr.	ST. LOUIS METROP.	190
Aylward, Howard J Sr.	ST. LOUIS METROP.	190
Ayvazian, Vatche H	ST. LOUIS METROP.	190
Azan, Abraham N	PETTIS	178
Azan, Kenneth N	PETTIS	178
Azzam, Farid J	ST. LOUIS METROP.	190

B

Babka, Joseph J	ST. LOUIS METROP.	190
Bach, Lysle M	NORTHEAST	150
Back, Donald K	GREENE	082
Backer, Matt H Jr.	ST. LOUIS METROP.	190
Backer, Robert J	ST. LOUIS METROP.	190
Backstrom, Jay T	METRO MED	125
Bade, Bruce	C-M-M-R	046
Baer, Alvin J	METRO MED	125
Baer, Jill M	ST. LOUIS METROP.	190
Bagby, Jack M Jr	GREENE	082
Bagby, James W	ST. LOUIS METROP.	190
Baglan, Robert J	ST. LOUIS METROP.	190
Bagwe, Lata R	ST. LOUIS METROP.	190
Bagwe, Ranjit M	ST CHARLES-LINCOLN	189
Bahn, Charles F	CAPE GIRARDEAU	042
Bai, Samuel S	JEFFERSON	106
Baik, Kenneth Y	SALINE	198
Bailey, Alan H	GREENE	082
Bailey, Drennan	ST. LOUIS METROP.	190
Bailey, Gregory J	ST. LOUIS METROP.	190
Bailey, Marsha L	ST. LOUIS METROP.	190
Bailey, Wm H	ST. LOUIS METROP.	190
Baird, Keim L	ST CHARLES-LINCOLN	189
Baker, Carl N	ST. LOUIS METROP.	190
Baker, Donald L	F-G-W	074
Baker, Gary E	SEMO	202
Baker, Josephine D	C-M-M-R	046
Baker, Philip J	METRO MED	125
Baker, Sherwood	BOONE	026
Baker, Warren C	ANDREW	010
Baldwin, Richard Jr.	ST. LOUIS METROP.	190
Baldwin, Richard M	GREENE	082
Baldwin, Theodore R	LAFAYETTE-RAY	118
Bale, Robert D	ST. LOUIS METROP.	190
Balfe, Dennis M	ST. LOUIS METROP.	190
Balfour, H. Brian	BUCHANAN	030
Balhuizen, John	CLAY-PLATTE	050
Ballal, Hebri S	ST. LOUIS METROP.	190
Ballard, Dewey P	BUCHANAN	030
Ballard, V. Bryce	METRO MED	125
Balster, Vernon H	ST. LOUIS METROP.	190
Bamshad, Jerry	ST. LOUIS METROP.	190
Bandle, Donald E	ST. LOUIS METROP.	190
Banerjee, Dilip	F-G-W	074
Banerji, Debabrata	ST. LOUIS METROP.	190
Banez, Colita L	ST. LOUIS METROP.	190
Bankuti, Ferenc	METRO MED	125
Banton, M. Roman	ST. LOUIS METROP.	190
Banton, Michael R	ST. LOUIS METROP.	190
Banton, Thomas J	ST. LOUIS METROP.	190
Banton, William C II	ST. LOUIS METROP.	190
Barbe, David O	SOUTH CENTRAL	206
Barbee, Chas W	BOONE	026
Barbour, Marvin R	B-W-R-C	034
Bardsley, John L	ST. LOUIS METROP.	190
Bare, Chester I Jr.	METRO MED	125
Bare, Edward E	NORTHWEST	158
Bareis, Robt J	WEBSTER	210
Barelli, Pat A	METRO MED	125
Bari, Wagih A	ST. LOUIS METROP.	190
Barker, Edward T	ST. LOUIS METROP.	190
Barloon, James H	METRO MED	125
Barlow, Val John	ST. LOUIS METROP.	190
Barnard, John L Jr.	METRO MED	125
Barner, Hendrick B	ST. LOUIS METROP.	190
Barnes, Larry G	OZARKS	166
Barnett, Floyd A	C-M-M-R	046
Barnett, Gordon P	METRO MED	125
Barnhill, Floyd R	GREENE	082
Barnthouse, Cris D	METRO MED	125
Barr, Glenn A	METRO MED	125
Barr, W. Kent	METRO MED	125
Barragan, Hector D	ST. LOUIS METROP.	190
Barrett, Scott R Sr.	ST. LOUIS METROP.	190
Barrow, Jack	ST. LOUIS METROP.	190
Barry, Wm B	METRO MED	125
Bart, Gerald N	ST. LOUIS METROP.	190
Bartell, Michael F	ST. LOUIS METROP.	190
Barter, Bruce	METRO MED	125
Bartlett, Hugh C	MID-MISSOURI	135
Bartlett, John E	GREENE	082
Bartley, Richard L	GREENE	082
Bartnick, Mitchel L	ST. LOUIS METROP.	190

---

*Doctor of osteopathy

Barton, Jean C	METRO MED	125
Barton, Premsri T	ST. LOUIS METROP.	190
Barton, Robert W	ST. LOUIS METROP.	190
Bartulica, Nicholas	BUCHANAN	030
Basantz, F. Victor	METRO MED	125
Bashford, Eileen A	CLAY-PLATTE	050
Bashiti, Mohammad F	ST. LOUIS METROP.	190
Baska, Richard E	METRO MED	125
Baskurt, Mehmet V	B-W-R-C	034
Bass, Barry J	MID-MISSOURI	135
Bass, James J	MID-MISSOURI	135
Bass, Walter R	METRO MED	125
Bassett, Gary L	CAPE GIRARDEAU	042
Bassman, Donald R	ST. LOUIS METROP.	190
Batan-Co, Ruby L	ST. LOUIS METROP.	190
Bateman, Timothy M	METRO MED	125
Bates, G. Comer	CLAY-PLATTE	050
Batts, Barbara A	METRO MED	125
Baue, Arthur E	ST. LOUIS METROP.	190
Bauer, Daniel J	ST. LOUIS METROP.	190
Bauer, Eugene A	ST. LOUIS METROP.	190
Bauer, John D	ST. LOUIS METROP.	190
Bauer, Jos A	ST. LOUIS METROP.	190
Bauer, Lafe W	METRO MED	125
Baula, Armindo G	ST. LOUIS METROP.	190
Baum, Frank E	METRO MED	125
Bauman, Alan E	METRO MED	125
Bauman, Henry C	NORTHWEST	158
Bauman, Mark A	B-W-R-C	034
Baumann, Albert P	MID-MISSOURI	135
Bauschard, Frederick D	ST. LOUIS METROP.	190
Bautista, Rogelio L	C-M-M-R	046
Bauwens, Daniel B	ST. LOUIS METROP.	190
Bay, Merrill R	METRO MED	125
Bayer, William L	METRO MED	125
Beal, Catherine E	ST. LOUIS METROP.	190
Bealer, Louis A	LACLEDE	115
Beall, McPherson S Jr.	METRO MED	125
Beare, Lucia V	ST. LOUIS METROP.	190
Beasley, Louis K	ST. LOUIS METROP.	190
Beato, David L	ST. LOUIS METROP.	190
Beatty, Eugene C	METRO MED	125
Beatty, Nina D	METRO MED	125
Beatty, Robert M	METRO MED	125
Beaty, Wm R	ST. LOUIS METROP.	190
Beauchamp, Gary D	METRO MED	125
Beck, Calvin E	METRO MED	125
Beck, Marcus R	BOONE	026
Beck, Paul M	BUCHANAN	030
Becker, Bernard	ST. LOUIS METROP.	190
Becker, Robt L	ST. LOUIS METROP.	190
Becker, Rolfe A	METRO MED	125
Becker, Stanley C	ST. LOUIS METROP.	190
Beckett, Wm. Wilson	BOONE	026
Beckette, Edmund	ST. LOUIS METROP.	190
Bedwell, Eleanor M	ST. LOUIS METROP.	190
Beeks, John W	METRO MED	125
Beene, Jackie S	JASPER	102
Beggs, Charles W	CLAY-PLATTE	050
Behbahani, Parviz M	ST. LOUIS METROP.	190
Beheler, Edward M	BUCHANAN	030
Behrends, Steven H	METRO MED	125
Behrens, Donald T	ST. LOUIS METROP.	190
Behrens, Gerald L	ST. LOUIS METROP.	190
Beidle, Raymond J	ST. LOUIS METROP.	190
Beitman, Bernard D	BOONE	026
Belden, Edgar A	COLE	058
Belden, Jeffery L	BOONE	026
Belen, Marietta	JEFFERSON	106
Belew, Joe E	ST. LOUIS METROP.	190
Bell, Hubert H	METRO MED	125
Bell, Laird A	GREENE	082
Bell, Michael F	SEMO	202
Bell, Robt M	NORTHEAST	150
Bell, Stephen	ST. LOUIS METROP.	190
Bell, Wm F	METRO MED	125
Beller, Thomas A	METRO MED	125
Bellus, Gary A	ST. LOUIS-RESIDENTS	195
Belshe, Sidney B	COLE	058
Benage, Clarence M	ST. LOUIS METROP.	190
Bender, Joan C	METRO MED	125
Benedict, William W	ST. LOUIS METROP.	190
Benitez, Jose A	CALLAWAY	038
Bennett, Danny L	METRO MED	125
Bennett, Desiree N	METRO MED	125
Bennett, James D	METRO MED	125
Bennett, John	ST. LOUIS METROP.	190
Bennett, John E	COLE	058
Bennett, Kenneth J	ST. LOUIS METROP.	190
Benoist, Louis A	B-W-R-C	034
Benoist, Walter F	ST. LOUIS METROP.	190
Benoit, Hector W Jr.	METRO MED	125
Benson, Larry E	CLAY-PLATTE	050
Benson, Ronald G	GREENE	082
Benson, Scott C	BUCHANAN	030
Benson, William F	METRO MED	125
Bentlage, Charles H	JASPER	102
Bentley, John D	GREENE	082
Berdy, Gregg J	ST. LOUIS METROP.	190
Berdy, Susan S	ST. LOUIS METROP.	190
Berg, Edward F	ST. LOUIS METROP.	190
Berg, Leonard	ST. LOUIS METROP.	190
Berg, Ralph	ST. LOUIS METROP.	190
Bergmann, Daniel J	ST CHARLES-LINCOLN	189
Bergmann, Martin	ST. LOUIS METROP.	190
Bergner, Grace E	ST. LOUIS METROP.	190
Berkowitz, Ellis R	BUCHANAN	030
Berkowitz, Wallace P	ST. LOUIS METROP.	190
Berland, David I	ST. LOUIS METROP.	190
Berland, Harry I	ST. LOUIS METROP.	190
Berman, Wm	ST. LOUIS METROP.	190
Bernabe, Florinio H	ST. LOUIS METROP.	190
Bernabe, Ofelia M	ST. LOUIS METROP.	190
Bernardo, Kerry L	ST. LOUIS METROP.	190
Berndsen, Gerard H	ST. LOUIS METROP.	190
Berner, Carol T	GREENE	082
Bernhardt, Gary D	METRO MED	125
Berni, Anthony A	ST. LOUIS METROP.	190
Bernstein, Aaron M	ST. LOUIS METROP.	190
Berry, Maxwell G	METRO MED	125
Berry, Paul T	GREENE	082
Berwald, David M	ST. LOUIS METROP.	190
Berwald, Irvin I	ST. LOUIS METROP.	190
Bessey, Palmer Q	ST. LOUIS METROP.	190
Best, John A	ST. LOUIS METROP.	190
Best, John F	GREENE	082
Bettasso, Bernard F	JASPER	102
Bettinger, Irene E	METRO MED	125
Bettonville, Paul J	ST. LOUIS METROP.	190
Bettonville, Peter V	ST. LOUIS METROP.	190
Betz, Richard J	OZARKS	166
Betz, Robert F	OZARKS	166
Bever, Grant A	WEST CENTRAL	214
Bhattacharya, Arjun	ST. LOUIS METROP.	190
Bhend, David P	JASPER	102
Bhothinard, Bhisit	B-W-R-C	034
Bialecki, Leon	ST. LOUIS METROP.	190
Biber, Robert J	METRO MED	125
Bickel, Vern T	BARTON	018
Bickley, James E	METRO MED	125
Biddy, Ralph L	ST. LOUIS METROP.	190
Bidwell, Robt E	METRO MED	125
Biel, Stanley I	ST. LOUIS METROP.	190
Biery, Richard M	METRO MED	125
Biggs, Alfred D Jr.	METRO MED	125
Biggs, F. Douglas	ST. LOUIS METROP.	190
Biggs, Fred J	B-W-R-C	034
Biggs, Harry L	METRO MED	125
Biggs, John	ST. LOUIS METROP.	190
Bilchik, Ronald C	ST. LOUIS METROP.	190
Billian, Virginia L	COLE	058
*Billow, Michael A	METRO MED	125
Bills, Marvin L	METRO MED	125
Billy, Lawrence J	ST. LOUIS METROP.	190
Binda, Robert E	METRO MED	125
Bindbeutel, Donald A	ST. LOUIS METROP.	190
Binnington, H B	ST. LOUIS METROP.	190
Binz, Donald E	ST CHARLES-LINCOLN	189
Bircher, John L	ST. LOUIS METROP.	190
Bird, H. Waldo Jr.	ST. LOUIS METROP.	190
Birenbaum, Aaron	ST. LOUIS METROP.	190
Birenboim, Nancy	METRO MED	125
Birge, Clifford A	ST. LOUIS METROP.	190
Birkby, Wm F	BOONE	026

---

*Doctor of osteopathy.

Bishop, Marion D	ST. LOUIS METROP.	190
Bizek, J L	OZARKS	166
Black, Don A	METRO MED	125
Black, Joseph T	ST. LOUIS METROP.	190
Black, Samuel P	BOONE	026
Black, Thomas C Jr.	METRO MED	125
Blackburn, Michael D	BOONE	026
Blackwell, Charles R	ST. LOUIS METROP.	190
Blackwell, Chas W	BOONE	026
Blades, Ross D	GREENE	082
Blaine, James R	GREENE	082
Blair, John Douglas	ST. LOUIS METROP.	190
Blair, Olga M	ST. LOUIS METROP.	190
Blair, Vilray P III	ST. LOUIS METROP.	190
Blalock, Robt W	SALINE	198
Blank, Michael K	JEFFERSON	106
Blanke, Thomas J	ST. LOUIS METROP.	190
Blankenship, Dale M	CAPE GIRARDEAU	042
Blankenship, Geo W	OZARKS	166
Blaskiewicz, Robert J	ST. LOUIS METROP.	190
Blath, Richard A	ST. LOUIS METROP.	190
Blim, R. Don	METRO MED	125
Bliss, Greg A	ST. LOUIS METROP.	190
Block, Arnold S	ST. LOUIS METROP.	190
Bloom, Stephen A	METRO MED	125
Bloomberg, Gordon R	ST. LOUIS METROP.	190
Bluestone, Kenneth I	ST. LOUIS METROP.	190
Blum, Philip C	METRO MED	125
Blumenthal, Mark F	ST. LOUIS METROP.	190
Blythe, James G	ST. LOUIS METROP.	190
Boatright, Kevin	MINERAL AREA	138
Bobrow, James C	ST. LOUIS METROP.	190
Bock, Linda P	ST. LOUIS METROP.	190
Bode, Eugene T	METRO MED	125
Bodenhausen, Gary E	METRO MED	125
Boedeker, James P	ST. LOUIS METROP.	190
Bogart, Douglas B	METRO MED	125
Bohigian, G M	ST. LOUIS METROP.	190
Bohn, William W	METRO MED	125
Bohnsack, Ralph W	GRAND RIVER	078
Bohon, Barbara D	METRO MED	125
Boldizar, Albert G	ST. LOUIS METROP.	190
Boldt, Thos H	ST. LOUIS METROP.	190
Boles, C R	ST. LOUIS METROP.	190
Boles, Murray	BOONE	026
Bolinske, Robt E	ST. LOUIS METROP.	190
Bollozos, George D	ST. LOUIS METROP.	190
Bolman, R. Morton III	ST. LOUIS METROP.	190
Bonacorsi, John	ST. LOUIS METROP.	190
Bondurant, Bryce H	ST. LOUIS METROP.	190
Bonebrake, Albert J	GREENE	082
Bonebrake, Mac D	GREENE	082
Bonfanti, Albert L	ST. LOUIS METROP.	190
Bonfili, Hubert F	ST. LOUIS METROP.	190
Bonham, Roger D	BOONE	026
Boniuk, Isaac	ST. LOUIS METROP.	190
Bonney, Saml C	F-G-W	074
Bonsanti, Robt L	ST. LOUIS METROP.	190
Boone, Daniel C	CLAY-PLATTE	050
Boone, Martin H Jr	GREENE	082
Boone, Vicky L	GREENE	082
Boonshaft, Benje	ST. LOUIS METROP.	190
Bopp, J. Ronald	JASPER	102
Bordy, Marvin D	METRO MED	125
Borello, Dan J	JASPER	102
Borja, Egbert R	GREENE	082
Borkon, A. Michael	METRO MED	125
Borodach, Gerold N	ST. LOUIS METROP.	190
Borowsky, Benj A	ST. LOUIS METROP.	190
Borrego, Paul A	MINERAL AREA	138
Borromeo, Carlos J	NORTHEAST	150
Bortnick, Arthur R	ST. LOUIS METROP.	190
Borts, Michael R	ST. LOUIS METROP.	190
Borup, Jerrell L	GREENE	082
Botwin, Arnold E	METRO MED	125
Bouhasin, John D	ST. LOUIS METROP.	190
Boulwarc, William T	GRAND RIVER	078
Bourgeois, Curtis H	BOONE	026
Bourjolly, Wilson P	ST. LOUIS METROP.	190
Boveri, Jos C	ST. LOUIS METROP.	190
Bowdern, Edward H	ST. LOUIS METROP.	190
Bowe, Christopher C	ST. LOUIS METROP.	190
Bowen, Stephen F Jr.	ST. LOUIS METROP.	190
Bowen, William G	ST. LOUIS METROP.	190
Bower, James S	METRO MED	125
Bower, Richard	ST. LOUIS METROP.	190
Bowerman, Harold H	ST. LOUIS METROP.	190
Bowers, Gregory R	SEMO	202
Bowers, James E	ST. LOUIS METROP.	190
*Bowers, James L	BUCHANAN	030
Bowersox, Warren A	ST. LOUIS METROP.	190
Bowles, G R	ST. LOUIS METROP.	190
Bowles, Richard P	CLAY-PLATTE	050
Bowles, Wm T	ST. LOUIS METROP.	190
Bowlin, Steven K	METRO MED	125
Bowman, Melvin C	OZARKS	166
Bowman, W. Kirk	CAPE GIRARDEAU	042
Bowser, John F	METRO MED	125
Bowser, Robert L	CLAY-PLATTE	050
Boyarsky, Saul	ST. LOUIS METROP.	190
Boyce, John M	PETTIS	178
Boyd, George K	METRO MED	125
Boyd, James H	BOONE	026
Boydston, Catherinc O	LAFAYETTE-RAY	118
Boydston, Wyatt W	LAFAYETTE-RAY	118
Boyer, Peter A	COLE	058
Boyer, Philip A	METRO MED	125
Boylan, Peter C	METRO MED	125
Brabbee, Gregory W	ST. LOUIS METROP.	190
Brabson, John H	GREENE	082
Braby, Howard H	METRO MED	125
Bradford, John F	METRO MED	125
Bradley, J. Douglas	BUCHANAN	030
Bradley, James K	METRO MED	125
Bradley, Richard V	ST. LOUIS METROP.	190
Bradley, Wm W	AUDRAIN	014
Bradshaw, Wm D	METRO MED	125
Brady, Harry R	ST. LOUIS METROP.	190
Brady, Hugh S	LAFAYETTE-RAY	118
Brady, Timothy T	ST. LOUIS METROP.	190
Brancato, Donald H	ST. LOUIS METROP.	190
Brand, Stanley N	METRO MED	125
Brandon, Frederick M	JASPER	102
Brandwin, Leslie M	ST. LOUIS METROP.	190
Brangle, Robt W	ST. LOUIS METROP.	190
Braun, Alan L	COLE	058
Braunschweig, Ralph	BOONE	026
Braverman, Abe E	METRO MED	125
Braxton, Frank W	CAPE GIRARDEAU	042
Brazil, Maria J	ST. LOUIS METROP.	190
Brazos, John C	PETTIS	178
Breckenridge, Robert L	CLAY-PLATTE	050
Breeden, Richard L	MID-MISSOURI	135
Bregant, Robt E	COLE	058
Bremer, Rita F	ST. LOUIS METROP.	190
Brems, John J	ST. LOUIS METROP.	190
Brennan, Danl J	ST. LOUIS METROP.	190
Brennan, Geo A	ST. LOUIS METROP.	190
Brennan, Richard J	BUCHANAN	030
Brennan, Robert A Jr.	ST. LOUIS METROP.	190
Brennan, Robt V	ST. LOUIS METROP.	190
Brennan, Robt A Sr.	ST. LOUIS METROP.	190
Brent, Lanny R Jr	GREENE	082
Brewer, John R	ST. LOUIS METROP.	190
Brewer, Joseph H	METRO MED	125
Brian, Wm J	GREENE	082
Brick, Jeffrey M	METRO MED	125
Bricker, Eugene M	ST. LOUIS METROP.	190
Bridwell, Keith H	ST. LOUIS METROP.	190
Brigden, Robert B	JASPER	102
Briggs, Thomas B	GREENE	082
Brigham, David W	ST. LOUIS METROP.	190
Bright, James E	GREENE	082
Brill, Joachim R	CLAY-PLATTE	050
Brinkman, Robert A	ST. LOUIS METROP.	190
Bristow, Robert B	BUCHANAN	030
Britt, Cornelius L	JEFFERSON	106
Broaddus, Loren E	GREENE	082
Brock, Arthur L	METRO MED	125
Brockman, Kirk E	F-G-W	074
Brockman, M. Douglas	GREENE	082
Brodeur, Armand E	ST. LOUIS METROP.	190
Brodkey, Mark J	METRO MED	125
Brody, Arnold G	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

*Bronfman, Jana R	BUCHANAN	030
Bronson, Shael S	ST. LOUIS METROP.	190
Brook, Charles J	METRO MED	125
Brookes, Robt D	ST. LOUIS METROP.	190
Brookreson, Alton D	B-W-R-C	034
Brooks, John E	GREENE	082
Brothers, Mary E	METRO MED	125
Broun, Goronwy O Jr.	ST. LOUIS METROP.	190
Brower, Clyde L	METRO MED	125
Brown, Adrian J	METRO MED	125
Brown, Barry D	ST. LOUIS METROP.	190
Brown, David W	GREENE	082
Brown, Elwyn S	METRO MED	125
Brown, Frances S	METRO MED	125
Brown, Frederick B	OZARKS	166
Brown, Freeman F III	ST. LOUIS METROP.	190
Brown, Irwin S	METRO MED	125
Brown, James T	GREENE	082
Brown, Katherine S	CALLAWAY	038
Brown, Marden L	METRO MED	125
Brown, Menzie H	METRO MED	125
Brown, Merlin D	BUCHANAN	030
Brown, Mike J	CAPE GIRARDEAU	042
Brown, Robert J	ST CHARLES-LINCOLN	189
Brown, Robt S	METRO MED	125
Brown, Seymour	ST. LOUIS METROP.	190
Browne, Jon E	METRO MED	125
Brownsworth, Ronnie D	GREENE	082
Bruce, Helen L	ST. LOUIS METROP.	190
Bruce, Leo A	SEMO	202
Bruce, Robert P	METRO MED	125
Brukardt, Diane T	BOONE	026
Bruner, Claude R	BOONE	026
Bruno, Ellen L	BOONE	026
Bruns, Kenneth	ST. LOUIS METROP.	190
Brunt, L. Michael	ST. LOUIS METROP.	190
Brunworth, David	F-G-W	074
Bryan, Wm H	METRO MED	125
Bryant, Lester R	BOONE	026
Bryant, T J	METRO MED	125
Buben, Robt W	NORTHEAST	150
Buchanan, Barbara N	METRO MED	125
Bucher, William C	BOONE	026
Buchert, Peter K	BOONE	026
Bucholz, Richard D	ST. LOUIS METROP.	190
Buchwach, Kenneth A	METRO MED	125
Buckner, Robert C	METRO MED	125
Bucy, James G	ST. LOUIS METROP.	190
Budd, John J Jr.	ST. LOUIS METROP.	190
Budd, John J III	ST. LOUIS METROP.	190
Budke, Harold A	METRO MED	125
Buehler, Carl T Jr	LAKE OF THE OZARKS	120
Buescher, Lucinda S	BOONE	026
Buettner, John Brigham	ST. LOUIS METROP.	190
Buffaloe, Robert N	COLE	058
Buie, Bruce R	METRO MED	125
Buie, Steven E	METRO MED	125
Bukstein, Michael J	NORTHEAST	150
Bult, Mark J	GREENE	082
Bumgarner, James E	BOONE	026
Bumgarner, Roger W	BOONE	026
Bunge, Nancy J	AUDRAIN	014
Bunting, Williston P	METRO MED	125
Burch, John E	JASPER	102
Burch, Timothy K	METRO MED	125
Burcham, Tom R	CAPE GIRARDEAU	042
Burdge, Robert E	ST. LOUIS METROP.	190
Burford, Edwin K	CAPE GIRARDEAU	042
Burgdorf, Max H	ST. LOUIS METROP.	190
Burgess, Dean	ST. LOUIS METROP.	190
Burk, Emmett K	CLAY-PLATTE	050
Burke, Robt J	ST. LOUIS METROP.	190
Burkey, Jordan W	GREENE	082
Burkhart, Edward F	ST. LOUIS METROP.	190
Burks, Michael L	BOONE	026
Burleigh, Bruce W	JASPER	102
Burmeister, R. William	ST. LOUIS METROP.	190
Burnett, Dak R	BUCHANAN	030
Burns, Edward L	ST. LOUIS METROP.	190
Burns, Francis J	ST. LOUIS METROP.	190
Burns, Francis R	NORTHEAST	150
Burns, Michael F	ST. LOUIS METROP.	190
Burns, Robert P	BOONE	026
Burns, Thos W	BOONE	026
Burr, Donald C	ST. LOUIS METROP.	190
Burroughs, Nathan D	CLAY-PLATTE	050
Burry, Virgil F	METRO MED	125
Burst, Donald O	ST. LOUIS METROP.	190
Burstein, Robert	ST. LOUIS METROP.	190
Burton, Dale F	NORTHEAST	150
Busch, Anthony K	ST. LOUIS METROP.	190
Busiek, Paul J	GREENE	082
Busse, Paul P	ST. LOUIS METROP.	190
Bussmann, Carl E	ST. LOUIS METROP.	190
Bussmann, Donald W	ST. LOUIS METROP.	190
Bussmann, Donald W Jr	GREENE	082
Bussmann, Yvonne L	GREENE	082
Butcher, Robert W	METRO MED	125
Butin, Richard E	METRO MED	125
Butler, Elza F	BUCHANAN	030
Butner, Michael R	SALINE	198
Butsch, Richard H	ST. LOUIS METROP.	190
Butt, James H	BOONE	026
Butterfield, Mari Anne	METRO MED	125
Butterworth, Nelson S	METRO MED	125
Butts, James D	MID-MISSOURI	135
Byars, Steven R	METRO MED	125
Byland, Saml J	MONTGOMERY	146
Bynum, Wm R	BOONE	026
Byrne, Robert M	ST. LOUIS METROP.	190
Byrum, Fritz A	ST. LOUIS METROP.	190

C

Cabal, Edito	ST. LOUIS METROP.	190
Cabal, Maria	ST. LOUIS METROP.	190
Cabanas, Justo J	METRO MED	125
Cabbabe, Edmond B	ST. LOUIS METROP.	190
Cabral, Galileu	ST. LOUIS METROP.	190
Cabrera, Tomas V	ST CHARLES-LINCOLN	189
Caciolo, Carlo P	ST. LOUIS METROP.	190
Cacioppo, Jos E	ST. LOUIS METROP.	190
Cadice, John B	ST. LOUIS METROP.	190
Cady, Roger K	GREENE	082
Caffrey, Raymond J	METRO MED	125
Cain, Alvin R	BARTON	018
Cajili, Antonio T	ST. LOUIS METROP.	190
Caldwell, Fred	B-W-R-C	034
Caldwell, John K	METRO MED	125
Caldwell, Joseph L	GREENE	082
Calhoun, Kirk A	METRO MED	125
Calhoun, Terry L	CLAY-PLATTE	050
Callaghan, Gerard M	ST. LOUIS METROP.	190
Callahan, Donald E	ST. LOUIS METROP.	190
Callahan, Jos D	ST. LOUIS METROP.	190
Callaway, Guy D Jr	GREENE	082
Callaway, Jo J	METRO MED	125
Callaway, Lawrence A	METRO MED	125
Callenbach, John C	METRO MED	125
Calodney, Martin M	ST. LOUIS METROP.	190
Calovich, Emery R	METRO MED	125
*Cameron, Roger W	COLE	058
Camp, Richard V	B-W-R-C	034
Campbell, Albert J	PETTIS	178
Campbell, Daniel C	OZARKS	166
Campbell, Edward D	CAPE GIRARDEAU	042
Campbell, Edward M	ST. LOUIS METROP.	190
Campbell, Frederick B	METRO MED	125
Campbell, Gregory S	BOONE	026
Campbell, J. William	ST. LOUIS METROP.	190
Campbell, James W	SEMO	202
Campbell, James E	C-M-M-R	046
Campbell, John G	METRO MED	125
Campbell, William S Jr	CAPE GIRARDEAU	042
Campos, Francisco J	ST. LOUIS METROP.	190
Canaan, Saml A	ST. LOUIS METROP.	190
Canale, John P	ST CHARLES-LINCOLN	189
Cancelada, Juan	MINERAL AREA	138
Canent, Ramon V	METRO MED	125
Canlas, Mario P	GREENE	082
Cannon, Edward M	ST. LOUIS METROP.	190
Cannon, Richard E	ST CHARLES-LINCOLN	189
Cantor, Harvey E	ST. LOUIS METROP.	190
*Cantor, Sol F	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Canty, Eugene J	ST CHARLES-LINCOLN	189
Caplin, David A	ST. LOUIS METROP.	190
Capps, Eugene C	METRO MED	125
Carden, Juan O	ST. LOUIS METROP.	190
Cardwell, Michael S	BOONE	026
Carleton, Chas E	MINERAL AREA	138
Carlin, Albert L	NORTHWEST	158
Carlin, M. Richard	ST. LOUIS METROP.	190
Carls, Garry L	ST. LOUIS METROP.	190
Carlson, Arne E	ST. LOUIS METROP.	190
Carlson, Hjalmar E	METRO MED	125
Carlson, John V	AUDRAIN	014
Carlton, Lynn N	GREENE	082
Carmody, John P	ST. LOUIS METROP.	190
Carnahan, Chas E	BOONE	026
Carnell, Billy M	D-H-P-D	066
Carnes, Victor M	JASPER	102
Carolla, Robert L	GREENE	082
Caronongan, Carmelito M	ST. LOUIS METROP.	190
Carpenter, Geo T	BUCHANAN	030
Carpenter, James L	ST CHARLES-LINCOLN	189
Carpenter, Wallace	NORTHWEST	158
Carr, George W	COLE	058
Carr, Phillip W	GREENE	082
Carranza, Mauro J	ST. LOUIS METROP.	190
Carrier, John A	ST. LOUIS METROP.	190
Carrington, Howard W	LACLEDE	115
Carroll, Danny K	WEST CENTRAL	214
Carroll, Thos W	BARTON	018
Carron, Oscar A	PERRY-STE GENEVIEVE	174
Carter, Edwin E	ST. LOUIS METROP.	190
Carter, James E Jr.	METRO MED	125
Carter, James R	OZARKS	166
Carter, James S	BOONE	026
Carter, Robert L	JASPER	102
Carter, Ronald D	BOONE	026
Caruso, Alfred A	METRO MED	125
Caruso, Peter J	METRO MED	125
Cary, John M	ST. LOUIS METROP.	190
Case, Mary E	ST. LOUIS METROP.	190
Case, Wm F	METRO MED	125
Casement, Brian A	METRO MED	125
Casey, Arthur L	ST. LOUIS METROP.	190
Casey, Edwin J	ST. LOUIS METROP.	190
Casey, Eliot C	ST. LOUIS METROP.	190
Cashman, John W	METRO MED	125
Cason, Elbert H	ST. LOUIS METROP.	190
Cassat, James D	F-G-W	074
Castaneda, Marco A	ST. LOUIS METROP.	190
Castasus, Manuel A	ST. LOUIS METROP.	190
Castillo, Michael E	CLAY-PLATTE	050
Catanzaro, Anthony F	ST. LOUIS METROP.	190
Catanzaro, Frank J Jr.	ST. LOUIS METROP.	190
Catanzaro, Frank J Sr.	ST. LOUIS METROP.	190
Catanzaro, Rudolph E	ST. LOUIS METROP.	190
Catron, David O	CAPE GIRARDEAU	042
Caughron, Michael R	METRO MED	125
Ceaser, James H	GREENE	082
Ceaser, Nancy H	GREENE	082
Centner, Paul J	METRO MED	125
Cento, Donald	SEMO	202
Chadaratana, Phadung	ST. LOUIS METROP.	190
Chaffin, Jerald D	TRI-LAKES	208
Chalkley, Judson I	BOONE	026
Chamness, James T	ST. LOUIS METROP.	190
Chanasue, John A	ST. LOUIS METROP.	190
Chand, Nazar	B-W-R-C	034
Chandler, Robt A	METRO MED	125
Chandra, Mahesh	METRO MED	125
Chandramohan, Nanjappa	JASPER	102
Chanduwadia, Dossu J	JEFFERSON	106
Chang, Chil K	BOONE	026
Chapman, James B	CAPE GIRARDEAU	042
Chapman, Jean A	CAPE GIRARDEAU	042
Chapman, Pamela Marie	JASPER	102
Charapata, Steven G	METRO MED	125
Charette, Richard P	METRO MED	125
Charles, Benj H	ST. LOUIS METROP.	190
Charles, Elaine Z	ST. LOUIS METROP.	190
Charles, Francois	ST. LOUIS METROP.	190
Charles, Nallathambi	JEFFERSON	106
Charnas, Raymond M	ST. LOUIS METROP.	190
Chase, Larry K	GREENE	082
Chase, Ned B	JASPER	102
Chastain, Chas W	MINERAL AREA	138
Chaudhari, A. Basit	CAPE GIRARDEAU	042
Chaudhuri, Sudha T	METRO MED	125
Chaudhuri, Tapan K	METRO MED	125
Chavala, Sudarsan	NORTHWEST	158
Chavez, Salvador	ST. LOUIS METROP.	190
Cheek, Chas W	BOONE	026
Chehval, Michael J	ST. LOUIS METROP.	190
Chellappa, Danu	JASPER	102
Chen, James Z.W.	ST. LOUIS METROP.	190
Cheng, Tuan Chou	DUNKLIN	070
Chern, Mou S	SOUTH CENTRAL	206
Chernoff, Selbert G	METRO MED	125
Chesney, George W	JASPER	102
Cheuk, Shu-Sum	ST. LOUIS METROP.	190
Childs, Donna S	METRO MED	125
Childs, Richard M	METRO MED	125
Chilton, Jonathan D	METRO MED	125
Chinsky, Murray	ST. LOUIS METROP.	190
Chipongian, Raul A	ST. LOUIS METROP.	190
Chirino, Octavio R	ST. LOUIS METROP.	190
Chishti, M. Ishaq	ST. LOUIS METROP.	190
Chitwood, G. Glen	BOONE	026
Chiu, Tai Mao	ST. LOUIS METROP.	190
Cho, Kyu S	ST. LOUIS METROP.	190
Chod, Ronald J	ST. LOUIS METROP.	190
Choi, Sei Young	ST CHARLES-LINCOLN	189
Chou, Yen Ping	ST. LOUIS METROP.	190
Choudhury, M. Hasan	SOUTH CENTRAL	206
Chouinard, Michael P	SEMO	202
Christ, Martin H	BUCHANAN	030
Christensen, Harold L	GREENE	082
Christiansen, Sidney G	BUCHANAN	030
Christiansen, Stephen D	GREENE	082
Christianson, Chas S	OZARKS	166
Christy, John P	B-W-R-C	034
Christy, Raymond A	GREENE	082
Christy, Richard R	GREENE	082
Chu, Fred C	ST. LOUIS METROP.	190
Chu, Peter Y	METRO MED	125
Chua, Steven	ST. LOUIS METROP.	190
Chun, Chung S	METRO MED	125
Chung, Kap Eun	MINERAL AREA	138
Chung, Richard T	METRO MED	125
Chung, T. David	B-W-R-C	034
Churchill, Stephen W	METRO MED	125
Chusak, Richard B	ST. LOUIS METROP.	190
Ciapciak, Stanley J	ST. LOUIS METROP.	190
Cibis, Gerhard W	METRO MED	125
Clark, David J	CAPE GIRARDEAU	042
Clark, David P	BOONE	026
Clark, Frank I	BOONE	026
Clark, Granville E	METRO MED	125
Clark, Irving H	METRO MED	125
Clark, Larry K	JASPER	102
Clark, Robert C	BUCHANAN	030
Clarke, Michael J	GREENE	082
Clarke, Michael S	GREENE	082
Clary, Wm F	GREENE	082
Claseman, Wilma W	ST. LOUIS METROP.	190
Claycomb, Gerald K	ST. LOUIS METROP.	190
Clayton, Edgar L	GREENE	082
Clemens, Robert M	PETTIS	178
Clement, Richard W	ST. LOUIS METROP.	190
Clever, Henry W	ST CHARLES-LINCOLN	189
Clever, Victor G	ST CHARLES-LINCOLN	189
Cline, Daniel M	METRO MED	125
Cline, Merle A	METRO MED	125
Cline, Patricia W	METRO MED	125
Clisham, John F	NORTHEAST	150
Cloogman, Howard M	METRO MED	125
Clothier, Robt W	METRO MED	125
Clough, Chas A	METRO MED	125
Clouse, John W	GREENE	082
Clymer, David J	METRO MED	125
Coates, James G	ST. LOUIS METROP.	190
Cobb, Milton L	ST. LOUIS METROP.	190
Coben, Lawrence A	ST. LOUIS METROP.	190
Cochran, Thos E	GREENE	082
Cockerell, Charles F	METRO MED	125
Cockerell, Sanford F	METRO MED	125
Coffee, Amos L	SOUTH CENTRAL	206

---

*Doctor of osteopathy.

Cohen, Bruce H	ST. LOUIS METROP.	190
*Cohen, Donald L	METRO MED	125
Cohen, Edward	ST. LOUIS METROP.	190
Cohen, Frank	ST. LOUIS METROP.	190
Cohen, Harry B	AUDRAIN	014
Cohen, Harry K	METRO MED	125
Cohen, Hillard K	ST. LOUIS METROP.	190
Cohen, Joel N	METRO MED	125
Cohen, Lawrence S	METRO MED	125
Cohen, Marvin C	METRO MED	125
*Cohen, Raymond F	ST. LOUIS METROP.	190
Cohen, Robert S	ST. LOUIS METROP.	190
Cohle, Richard R	JASPER	102
Cohrs, Clarence C	C-M-M-R	046
Coin, Richard E	ST. LOUIS METROP.	190
Cokingtin, Leovigildo C	METRO MED	125
Cokrhame, Jack	ST. LOUIS METROP.	190
Colbert, Dennis G	ST. LOUIS METROP.	190
Colbert, Robt S	SEMO	202
Cole, Donald E	BOONE	026
Cole, Harry O	ST. LOUIS METROP.	190
Cole, Sherman W	METRO MED	125
Cole, Wm R	PETTIS	178
Coleman, Matthew J	CAPE GIRARDEAU	042
Colglazier, Mary C	METRO MED	125
Collier, Robert E	METRO MED	125
Collins, Douglass D	GREENE	082
Collins, John W	METRO MED	125
Collins, John M	ST. LOUIS METROP.	190
Collison, R Michael	GREENE	082
Colom, Geo A	METRO MED	125
Colter, Kim D	F-G-W	074
Colwill, Jack M	BOONE	026
Comas, Manuel R	ST. LOUIS METROP.	190
*Combs, Marvin D	NORTHWEST	158
Comeau, Richard J	SEMO	202
Comens, Ruth C	ST. LOUIS METROP.	190
Comer, Julian R	NORTHEAST	150
Comfort, Geo D	AUDRAIN	014
Commerford, John F	ST CHARLES-LINCOLN	189
Conant, James F	BUCHANAN	030
Conde, Gary A	JASPER	102
Conn, Robert D	METRO MED	125
Connelly, Michael W	ST CHARLES-LINCOLN	189
Conner, Patrick R	ST. LOUIS METROP.	190
Conner, W. Edwin	METRO MED	125
Connors, Robert H	ST. LOUIS METROP.	190
Conoyer, J. Michael	ST CHARLES-LINCOLN	189
Conrad, Marshall B	ST. LOUIS METROP.	190
Conrad, Raymond C	GREENE	082
Conroy, James A	BUCHANAN	030
Conway, Robert R	BOONE	026
Cook, James R	GREENE	082
Cook, Jerry W	CLAY-PLATTE	050

Cook, Katherine S	MID-MISSOURI	135
Cook, Marvin	ST. LOUIS METROP.	190
Cook, Thos B	LAFAYETTE-RAY	118
Cooksey, Jon D	ST. LOUIS METROP.	190
Cooper, Barry J	ST. LOUIS METROP.	190
Cooper, Barry R	CLAY-PLATTE	050
Cooper, C Wesley	GREENE	082
Cooper, Chas W II	COLE	058
Cooper, Gary D	CLAY-PLATTE	050
Cooper, James F	ST. LOUIS METROP.	190
Cooper, Robt L	JOHNSON	110
Cooper, Robt L II	JOHNSON	110
Cooper, Theodore	ST. LOUIS METROP.	190
Cooper, Thomas J	CALLAWAY	038
Cooper, Thomas J	ST. LOUIS METROP.	190
Coordes, Cordie C	ST. LOUIS METROP.	190
Cope, James C	BOONE	026
Cope, Jos S	LAFAYETTE-RAY	118
Copeland, Jeffrey G	ST CHARLES-LINCOLN	189
Copp, Ralph	ST. LOUIS METROP.	190
Coppinger, Thos A	METRO MED	125
Corcoran, Francis H	JASPER	102
Corday, Robt J	ST. LOUIS METROP.	190
Cordell, Larry D	METRO MED	125
Corder, James C	ST. LOUIS METROP.	190
Corder, Robt L	BUCHANAN	030
Cordonnier, James K	GREENE	082
Cornwell, Karen R	METRO MED	125
Coronado, Mario A	ST. LOUIS METROP.	190
Corrado, Joseph A	AUDRAIN	014
Corry, Francis M	GREENE	082
Cortez, Edwin A	METRO MED	125
Cortner, Mary C	METRO MED	125
Corvalan, Juan C	ST. LOUIS METROP.	190
Corwin, Kenneth D	ST. LOUIS METROP.	190
Coscia, Robert L	GREENE	082
Costello, Jos P	ST. LOUIS METROP.	190
Costen, William S	ST. LOUIS METROP.	190
Costin, Jimmy L	B-W-R-C	034
Cotner, Mark S	JASPER	102
Cotton, Thos R	METRO MED	125
Couchonnal, Guillermo	METRO MED	125
Coulson, Forest H	CAPE GIRARDEAU	042
Coulter, James W	GREENE	082
Courter, Larry P	COLE	058
Covert, Richard A	ST. LOUIS METROP.	190
Cowan, Geo A	METRO MED	125
Cowan, John H	METRO MED	125
Cox, Curtis S	COLE	058
Cox, James L	ST. LOUIS METROP.	190
Cox, John P	BUCHANAN	030
Cox, Kenneth E	METRO MED	125
Cox, Mary E	ST. LOUIS METROP.	190
Cox, W. Welby	GREENE	082
Cox, Wm A	COLE	058
Coxe, Wm S	ST. LOUIS METROP.	190

Coyne, Patrick M	ST. LOUIS METROP.	190
Cozart, Duane E	ST. LOUIS METROP.	190
Cozean, Charles H	CAPE GIRARDEAU	042
Crabtree, Jay B	D-H-P-D	066
Cradock, Thomas V	ST. LOUIS METROP.	190
Craemer, Chris W	METRO MED	125
Crafts, David	ST. LOUIS METROP.	190
Craig, Alan G	ST. LOUIS METROP.	190
Craig, Richard O	BUCHANAN	030
Craighead, Michael L	COLE	058
Crain, James W	TRI-LAKES	208
Cramer, Quentin	METRO MED	125
Crandall, Richard E	ST. LOUIS METROP.	190
Crane, John B	F-G-W	074
Cravens, William P	CALLAWAY	038
Craver, Jeffrey L	ST. LOUIS METROP.	190
Crawford, Katherine J	ST. LOUIS METROP.	190
Crawford, Oral B	GREENE	082
Crawley, Jennifer H	METRO MED	125
Crepps, Louis F	ST. LOUIS METROP.	190
Crespin, Stephen R	ST. LOUIS METROP.	190
Crespo, Horacio T	F-G-W	074
Crespo, Remedios R	F-G-W	074
Crie, J. Stanley	BUCHANAN	030
Crighton, John C	GREENE	082
Crighton, M. Nanette	GREENE	082
Criscione, James R	ST. LOUIS METROP.	190
Criscione, James R Sr.	ST. LOUIS METROP.	190
Criscione, James S	ST. LOUIS METROP.	190
Crispell, Lawrence S	JASPER	102
Crist, Charles L	CAPE GIRARDEAU	042
Critchlow, J. Thomas	AUDRAIN	014
Critchlow, Wm C	SEMO	202
Crockett, James E	METRO MED	125
Cronemeyer, Richard L	METRO MED	125
Crosby, William H	JASPER	102
Cross, Albert D	GRAND RIVER	078
Crosthwait, Edward L	GREENE	082
Crotty, John P	ST. LOUIS METROP.	190
Crouch, John A	BOONE	026
Crouch, Thos T	METRO MED	125
Croughan, Jack L	ST. LOUIS METROP.	190
Crow, Martin L	METRO MED	125
Crowley, Wm J	BOONE	026
Crumpacker, Margaret	ST. LOUIS METROP.	190
Cruz, Eligio C	ST. LOUIS METROP.	190
Cruz, Sergio G	OZARKS	166
Cubillo, Enrique	ST. LOUIS METROP.	190
Cuddihee, Robert E	ST. LOUIS METROP.	190
Cuento, Oblendo A	ST. LOUIS METROP.	190
Cullum, Albert G	ST. LOUIS METROP.	190
Culver, Perry J Jr.	METRO MED	125
Cundiff, H. Clay	CAPE GIRARDEAU	042
Cunningham, D. Dean	GREENE	082
Cunningham, Edwin J	ST. LOUIS METROP.	190
Cunningham, Milamari A	BOONE	026

---

*Doctor of osteopathy.

Cunningham, Richard D	GREENE	082
Cunningham, William F	GREENE	082
Cupp, Gerald V	BOONE	026
Cupples, Tommy E	CAPE GIRARDEAU	042
Curnow, Richard B	CLAY-PLATTE	050
Curran, Desmond	METRO MED	125
Curran, Terrence	METRO MED	125
Curry, Michael D	BOONE	026
Curry, Michael J	ST CHARLES-LINCOLN	189
Curry, Stephan R	GREENE	082
Curtis, Jack J	BOONE	026
Curts, Calvin J	METRO MED	125
Custer, Philip L	ST. LOUIS METROP.	190
Cusumano, Joseph V	ST. LOUIS METROP.	190
Cusworth, Robert	ST CHARLES-LINCOLN	189
Cutler, Harold M	ST. LOUIS METROP.	190
Cygan, Ronald W	METRO MED	125
Cyriac, George K	AUDRAIN	014
Czebrinski, Edward W	ST. LOUIS METROP.	190

D

D'Souza, Benedict	ST. LOUIS METROP.	190
Daake, John W Sr.	ST. LOUIS METROP.	190
Daake, John W Jr.	ST. LOUIS METROP.	190
Dabbs, Wilbur D	OZARKS	166
Dagartzikas, A K	ST. LOUIS METROP.	190
*Dagen, Daniel L	JASPER	102
Dahm, Chas H Jr.	ST. LOUIS METROP.	190
Daily, Donna K	METRO MED	125
Daily, James M	GREENE	082
Daley, Frank R	GRAND RIVER	078
Dalgleish, Frederick A	C-M-M-R	046
Dalton, Arthur R	ST. LOUIS METROP.	190
Dalton, Timothy T	METRO MED	125
Daly, James W	BOONE	026
Dames, Richard J III	ST. LOUIS METROP.	190
Damron, Edward O	ST CHARLES-LINCOLN	189
Dandamudi, Babu R	ST. LOUIS METROP.	190
Dandridge, Walter C	JASPER	102
Danforth, Wm H	ST. LOUIS METROP.	190
Dang, Phung T	ST. LOUIS METROP.	190
Dang, Robert C	WEST CENTRAL	214
Daniels, John S	ST. LOUIS METROP.	190
Danielsson, Ernst P	GREENE	082
Danis, Richard K	ST. LOUIS METROP.	190
Dankner, Arnold	ST. LOUIS METROP.	190
Dankner, Rand E	ST. LOUIS METROP.	190
Darnell, Dale E	METRO MED	125
Darnell, Thos F	BOONE	026
Dash, Udaya N	ST. LOUIS METROP.	190
Dasovich, Judith A	C-M-M-R	046
Datta, Narendar K	MINERAL AREA	138
Daum, Harold F	PETTIS	178
Daus, Arthur S	JASPER	102
Davault, Geo K	LAFAYETTE-RAY	118
Davidner, Mark L	METRO MED	125
Davidson, Kendrick C	METRO MED	125
Davidson, Morris	ST. LOUIS METROP.	190
Davidson, Raymond P	ST. LOUIS METROP.	190
Davis, Alexander C	METRO MED	125
Davis, Alfred W Jr.	METRO MED	125
Davis, Carl S	METRO MED	125
Davis, Charles S	JASPER	102
Davis, Donald R	METRO MED	125
Davis, Gene L	ST. LOUIS METROP.	190
Davis, Herbert V	METRO MED	125
Davis, Jack M	METRO MED	125
Davis, John M	METRO MED	125
*Davis, Larry E	CLAY-PLATTE	050
Davis, Leonard L	AUDRAIN	014
Davis, Marlou D	ST. LOUIS METROP.	190
Davis, Martin W	ST. LOUIS METROP.	190
Davis, Mary A	ST. LOUIS METROP.	190
Davis, Sheldon	ST. LOUIS METROP.	190
Davis, Thomas N	MINERAL AREA	138
Davis, Thomas P III	GREENE	082
Davis, W. Bob	METRO MED	125
Davis, Wm E	BOONE	026
Davisson, Walter F	COLE	058
Day, Chester L	METRO MED	125
Day, Romney M	BUCHANAN	030
Dean, Francis D	BOONE	026
Dean, Philip D	F-G-W	074
Dean, Walter E	NORTHWEST	158
Deane, Louis V Jr.	ST. LOUIS METROP.	190
Deardeuff, Dwight L	MID-MISSOURI	135
Debnam, James W Jr.	ST. LOUIS METROP.	190
Decanini, Mario	BUCHANAN	030
Deckard, Shelby W	GREENE	082
Decker, Albert I	GREENE	082
Deckert, James J	ST. LOUIS METROP.	190
Deeken, James H	METRO MED	125
Deeths, Tony M	ST. LOUIS METROP.	190
*Deffenbaugh, Larry D	JASPER	102
Dehner, Jonathan D	ST. LOUIS METROP.	190
Deitchman, Robt B	ST. LOUIS METROP.	190
Del Pizzo, Ferdinand	ST CHARLES-LINCOLN	189
Del Rosario, Horacio O	ST. LOUIS METROP.	190
Del Valle, Fernando	ST. LOUIS METROP.	190
*Delaney, Adrain J Jr.	METRO MED	125
Delcambre, Marie A	METRO MED	125
Deleste, Carlos J	JEFFERSON	106
Deligeorges, John	CLAY-PLATTE	050
Delwood, Don M	BOONE	026
Dembinski, David R	METRO MED	125
Dement, Oman E	JASPER	102
Dempsey, Herbert A	METRO MED	125
Dempsey, Kenneth J	SEMO	202
Dempsey, Maureen E	BOONE	026
Denes, Bela	ST. LOUIS METROP.	190
Denk, Alan F	ST. LOUIS METROP.	190
Denninghoff, James S	BOONE	026
Denninghoff, James C	BOONE	026
Dennison, Bruce F	B-W-R-C	034
Dennison, Carl F	ST. LOUIS METROP.	190
Dent, George W	MINERAL AREA	138
Denton, John L	COLE	058
Deshpande, V	ST. LOUIS METROP.	190
Dettmer, Robt F	MINERAL AREA	138
Deutch, Max	ST. LOUIS METROP.	190
Devabhaktuni, Rama Devi	ST. LOUIS METROP.	190
Dever, Robert L	B-W-R-C	034
Devine, John B	ST. LOUIS METROP.	190
Devine, Mark W	CLAY-PLATTE	050
Devineni, V. Rao	ST. LOUIS METROP.	190
Devins, George S	METRO MED	125
Devkota, Jagadishwar	BOONE	026
Dew, Thomas A	ST. LOUIS METROP.	190
Dewald, Paul A	ST. LOUIS METROP.	190
Dewein, Edward G	ST. LOUIS METROP.	190
Dexheimer, Frank R	BOONE	026
Dexter, J. Kent	GREENE	082
Dexter, James D	BOONE	026
DeBoard, James W	ST. LOUIS METROP.	190
DeFelice, Charles E	CAPE GIRARDEAU	042
DeFeo, Frederick G	METRO MED	125
DeFeo, Theodore C	METRO MED	125
DeGenova, Gerard H	PERRY-STE GENEVIEVE	174
DeGuerre, Ronald K	ST. LOUIS METROP.	190
DeLeeuw, Karel A	GREENE	082
DeMarchena, Octavio	ST. LOUIS METROP.	190
DePriest, Michael D	BUCHANAN	030
DeSilva, Ananda	ST. LOUIS METROP.	190
DeSpain, John D	BOONE	026
DeTar, Burleigh E	JASPER	102
DeUngria, Pablo C	ST. LOUIS METROP.	190
DeVera, Anson E	ST. LOUIS METROP.	190
Dias, Wenceslaus P	D-H-P-D	066
Diaz-Arias, Alberto A	BOONE	026
Diaz-Arias, Michele A	BOONE	026
Dick, Mary M	BOONE	026
Dickerson, William J	LAKE OF THE OZARKS	120
Dickler, Donald J	ST. LOUIS METROP.	190
Diehl, Antoni M	METRO MED	125
Diehl, Elizabeth W	ST. LOUIS METROP.	190
Diemer, David P	ST. LOUIS METROP.	190
Diemer, Kathryn M	ST. LOUIS METROP.	190
Diemer, Peter A	ST. LOUIS METROP.	190
Dierberg, Dale F	F-G-W	074
Dierker, Harry D	MINERAL AREA	138
Diestelhorst, James A	ST. LOUIS METROP.	190
Dieterich, Russell B	ST CHARLES-LINCOLN	189
Dillard, Burl M	ST. LOUIS METROP.	190
Dillard, Erin M	GREENE	082
Dills, Joseph N	GREENE	082

---

*Doctor of osteopathy.

Dilworth, Jacquelyn B	ST. LOUIS METROP.	190
Dimayuga, Nestor G	SOUTH CENTRAL	206
Dinkins, James A	CAPE GIRARDEAU	042
Ditmore, Q Michael	BOONE	026
Dix, Patricia M	GREENE	082
Dixon, Druery J	SOUTH CENTRAL	206
Dixon, Geo D	METRO MED	125
Dixon, Herbert K	JASPER	102
Dixon, John R	GRAND RIVER	078
Dizney, Desmion M	NORTHWEST	158
DiCecco, Charles J	ST. LOUIS METROP.	190
DiFilippo, Emil A	ST CHARLES-LINCOLN	189
DiLeo, Senatro W	ST. LOUIS METROP.	190
DiPasco, Donald J	ST. LOUIS METROP.	190
Dlabal, Luke J Jr.	METRO MED	125
Dlabal, Luke J Sr.	METRO MED	125
Dmytryk, Eugene T	ST. LOUIS METROP.	190
Dodge, Philip P	ST. LOUIS METROP.	190
Dodson, William E	ST. LOUIS METROP.	190
Doerhoff, Adelia L	COLE	058
Doerhoff, Alan R	COLE	058
Doerhoff, Carl R	COLE	058
Doering, Robt W	METRO MED	125
Doerr, Dale E	ST. LOUIS METROP.	190
Doherty, Daniel W	SOUTH CENTRAL	206
Dohrn-Weisman, Renate	ST. LOUIS METROP.	190
Doisy, Philip P	ST. LOUIS METROP.	190
Doisy, Robt A	ST. LOUIS METROP.	190
Dolan, Patrick H	ST. LOUIS METROP.	190
Dolan, Renee C	ST. LOUIS METROP.	190
Domann, Darrel D	GREENE	082
Domke, Henry F	COLE	058
Donahoe, James L	ST. LOUIS METROP.	190
Donati, Robt M	ST. LOUIS METROP.	190
Donley, Leo F	ST. LOUIS METROP.	190
Donnell, Harold E	JEFFERSON	106
Donnell, Robt H	JEFFERSON	106
Donnell, William S Jr	D-H-P-D	066
Donohoe, Charles D	METRO MED	125
Donovan, John F	ST. LOUIS METROP.	190
Donovan, Thos J	ST. LOUIS METROP.	190
Doody, Patrick T	JASPER	102
Dooley, Joseph M Jr.	ST. LOUIS METROP.	190
Dooley, Thomas W	BOONE	026
Dorsch, Ervin H	METRO MED	125
Dorsett, Sarah J	METRO MED-RESIDENTS	126
Dorton, Robt K	ST. LOUIS METROP.	190
Dorzab, Linda L	METRO MED	125
Dorzab, William E	METRO MED	125
Douglass, Eric J	BUCHANAN	030
Dovre, Erik J	ST. LOUIS-RESIDENTS	195
Dowell, Geo H	ST. LOUIS METROP.	190
Dowell, J Larry	GREENE	082
Downey, James W	METRO MED	125
Downey, Jon P	CAPE GIRARDEAU	042
Downs, Daniel M	METRO MED	125
Doyle, Chas R	ST. LOUIS METROP.	190
Drace, Charles C Jr.	ST. LOUIS METROP.	190
Drake, Avery A	MID-MISSOURI	135
Drake, Roy F	METRO MED	125
Drake, William L Jr.	ST. LOUIS METROP.	190
Draney, Thos E	METRO MED	125
Dreher, Richard L	METRO MED	125
Drescher, Emmett B	ST. LOUIS METROP.	190
Drews, Robt C	ST. LOUIS METROP.	190
Drey, Norman W	ST. LOUIS METROP.	190
Dreyer, Carl J	ST. LOUIS METROP.	190
Dreyer, Philip V	C-M-M-R	046
Dreyer, Wm F	SOUTH CENTRAL	206
Driks, Michael R	METRO MED	125
Drisko, Robert M	METRO MED	125
Drisko, Robert M II	METRO MED	125
Drozda, Joseph P Jr.	ST. LOUIS METROP.	190
Druet, Robert L	GREENE	082
Dubin, Sol H	METRO MED	125
Duda, Ralph J Jr.	GREENE	082
Dudik, Randall G	BUCHANAN	030
Dueker, David K	BOONE	026
Duello, Deborah K	METRO MED	125
Duemler, Robt H	ST. LOUIS METROP.	190
Duensing, George F	GREENE	082
Duer, Mildred C	METRO MED	125
Duerksen, Joseph J	METRO MED	125
Duff, James E	GREENE	082
Duff, John A	C-M-M-R	046
Duff, William M	SOUTH CENTRAL	206
Duffy, Francis G	ST. LOUIS METROP.	190
Duffy, Oliver F	GRAND RIVER	078
Dugan, Gerald F	METRO MED	125
Duggan, John J Jr.	ST. LOUIS METROP.	190
Dugger, David E	ST. LOUIS METROP.	190
Dukstein, Walter G Jr.	METRO MED	125
Duling, Gerald J	ST CHARLES-LINCOLN	189
Dumadag, Virgilio P	ST. LOUIS METROP.	190
Dumonceaux, Leonard J	MID-MISSOURI	135
Duncan, David T	ST CHARLES-LINCOLN	189
Duncan, Douglas M	GREENE	082
Duncan, Robt D	GREENE	082
Duncan, Wm H	METRO MED	125
Dunlap, Michael D	BUCHANAN	030
Dunn, Robert C Jr.	ST. LOUIS METROP.	190
Dunshee, Robt E	NORTHWEST	158
Duong, Mo Hong	BOONE	026
Durbin, Patrick H	ST. LOUIS METROP.	190
Durel, Justin H	ST. LOUIS METROP.	190
Durie, Robt H	METRO MED	125
Durnell, Monaford D	METRO MED	125
Durr, Jon W	ST. LOUIS METROP.	190
DuMont, Clement C	BUCHANAN	030
DuMontier, Alan J	ST. LOUIS METROP.	190
Dwyer, Frank X	METRO MED	125
Dye, Derry D Jr.	B-W-R-C	034
Dyer, Curtis W	JOHNSON	110
Dyer, Dallas J	ST. LOUIS METROP.	190
Dyer, Gary A	BUCHANAN	030
DyRagos, Ramon R	CLAY-PLATTE	050
Dzundzev, Penco T	ST. LOUIS METROP.	190
Dzur, James R	CAPE GIRARDEAU	042

E

Eachempati, Rama G	ST. LOUIS METROP.	190
Eachempati, Uma R	ST. LOUIS METROP.	190
Eades, Joseph W	ST. LOUIS METROP.	190
Early, Gerald L	METRO MED	125
Earnest, James B	METRO MED	125
Eaton, Paula	METRO MED	125
Ebel, Eugene H	ST. LOUIS METROP.	190
Ebel, James E	ST. LOUIS METROP.	190
Eberle, Vincent L	ST. LOUIS METROP.	190
Eck, Birkle	ST. LOUIS METROP.	190
Eckenrode, James F	BOONE	026
Ecker, Desider B	ST. LOUIS METROP.	190
Eckert, Clarence T	ST. LOUIS METROP.	190
*Eckstein, Tim E	PERRY-STE GENEVIEVE	174
Edele, Eugene H	ST. LOUIS METROP.	190
Edelman, Alan H	ST. LOUIS METROP.	190
Edgren, Donald C	GRAND RIVER	078
Edmisten, Jack	METRO MED	125
Edmonds, Robt W	PETTIS	178
Edwards, Charles F	C-M-M-R	046
Edwards, David R	PETTIS	178
Edwards, James E	ST. LOUIS METROP.	190
Edwards, Jos C	ST. LOUIS METROP.	190
Edwards, Ryan K	PETTIS	178
Edwards, Theodore F	CLAY-PLATTE	050
Egan, Robert C	ST. LOUIS METROP.	190
Egan, Thos F	ST. LOUIS METROP.	190
Egbert, Robert N	GREENE	082
Eggers, George W Jr.	BOONE	026
Eggleston, Donald E	C-M-M-R	046
Eggleston, Harry C	ST. LOUIS METROP.	190
Eggleston, Thos F	ST. LOUIS METROP.	190
Ehrlich, Carl F	ST. LOUIS METROP.	190
Eidelman, Jack R	ST. LOUIS METROP.	190
Eikermann, William C	METRO MED	125
Eisemann, Gustave	METRO MED	125
Eisen, Arthur Z	ST. LOUIS METROP.	190
Eisenmann, Benj P	F-G-W	074
Ekern, H. Peter	AUDRAIN	014
Ekunno, Josiah O	ST. LOUIS METROP.	190
Elcock-Skimming, Devera M	ST. LOUIS METROP.	190
Eldenburg, Donald O	PETTIS	178
Elders, Frank A	MID-MISSOURI	135
Elias, David J	METRO MED	125
Eliasson, Sven G	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Elkins, Robert L	METRO MED	125
Elkins, Ronald F	GREENE	082
Ellegood, James H	MINERAL AREA	138
Eller, Chas H	ST. LOUIS METROP.	190
Eller, Gordon W	CAPE GIRARDEAU	042
Ellersieck, Dorothy M	ST. LOUIS METROP.	190
Ellfeldt, Howard J	METRO MED	125
Elliott, Raymond G	METRO MED	125
Elliott, Wade E	METRO MED	125
Elliott, Wendell H	B-W-R-C	034
Ellis, Francis J	GREENE	082
Ellis, Harry L	GREENE	082
Ellis, Jean H	METRO MED	125
Ellis, John C	METRO MED	125
Ellsasser, James C	ST. LOUIS METROP.	190
Elser, Otto H	METRO MED	125
Elterman, Joseph J	JEFFERSON	106
Elwing, Terry J	BOONE-RESIDENT SEC.	027
Ely, Norman B	GREENE	082
Emeran, George J	ST. LOUIS METROP.	190
Emory, Jeffrey O	METRO MED	125
Engelhardt, Robt C	B-W-R-C	034
Engelken, Michael K	NORTHWEST	158
Engelmann, Calvin E	METRO MED	125
English, Milton T	NORTH CENTRAL	162
English, Wallace D	DUNKLIN	070
Enriquez, Roman S	METRO MED	125
Eppright, Thomas D	BOONE	026
Epstein, James M	ST. LOUIS METROP.	190
Epstein, Mark L	CLAY-PLATTE	050
Ericsson, Sarl E	METRO MED	125
Erie, Michael N	ST CHARLES-LINCOLN	189
Ernst, Edwin C Jr.	ST. LOUIS METROP.	190
Ernst, Edwin C III	ST. LOUIS METROP.	190
Ernst, Jos G	ST. LOUIS METROP.	190
Ernst, Richard E	ST. LOUIS METROP.	190
Ernst, Roland P	ST. LOUIS METROP.	190
Esch, John G	JASPER	102
Escobar, Nelson G	BUCHANAN	030
Escoffery, Richard F	ST. LOUIS METROP.	190
Esparrago, F R	OZARKS	166
Esslinger, Arthur T	ST. LOUIS METROP.	190
Essmyer, Joseph K	CAPE GIRARDEAU	042
Esther, James H	ST. LOUIS METROP.	190
Esther, John R	JASPER	102
Estrem, Scott A	BOONE	026
Eto, Jackson K	ST. LOUIS METROP.	190
Ettelson, Charles D	ST. LOUIS METROP.	190
Eubank, David F	METRO MED	125
Eubank, Wm Y	METRO MED	125
Evans, Ezra L	GREENE	082
Evans, Jos C	METRO MED	125
Evans, Lawrence G Jr.	ST. LOUIS METROP.	190
Evans, Lawrence L	METRO MED	125
Evens, Ronald G	ST. LOUIS METROP.	190
*Everett, James E	METRO MED	125
Eversoll, Norton J	ST. LOUIS METROP.	190
Exarhou, Klark	ST. LOUIS METROP.	190
Exon, C S	COLE	058

F

Fabian, Leonard W	ST. LOUIS METROP.	190
Fabito, Daniel C	ST. LOUIS METROP.	190
Fabito, Melinda C	ST. LOUIS METROP.	190
Fair, Wm L	GRAND RIVER	078
Fairchild, James F	PERRY-STE GENEVIEVE	174
Fairchild, Robt C	METRO MED	125
Fajatin, Romulo J	ST CHARLES-LINCOLN	189
Fakhoury, Donald A	CLAY-PLATTE	050
Fallon, Richard H	ST. LOUIS METROP.	190
Falzone, John J	COLE	058
Farber, Barry S	GREENE	082
Farberman, Elliott	ST. LOUIS METROP.	190
Farkas, James R	PETTIS	178
Farley, W. Joe	OZARKS	166
Farmer, Norma D	MINERAL AREA	138
Farnham, Milo M	METRO MED	125
Faron, Mark A	ST. LOUIS METROP.	190
Farrar, Michael W	METRO MED	125
Farrell, Edwin G	METRO MED	125
Farrell, John S	ST. LOUIS METROP.	190
Farrell, Sammy L	F-G-W	074
Farrell, Susan E	METRO MED	125
Farthing, Gene W	GREENE	082
Farzana, Farida	ST. LOUIS METROP.	190
Fathman, Anthony E	ST. LOUIS METROP.	190
Favazza, Armando P	BOONE	026
Favors, Adolphus C Jr.	ST. LOUIS METROP.	190
Fedotin, Michael S	METRO MED	125
Fee, Chester F	METRO MED	125
Fehlman, Bernard F	ST. LOUIS METROP.	190
Feibel, Robt M	ST. LOUIS METROP.	190
Feigl, Alexander J	ST. LOUIS METROP.	190
Feind, Earl E	MID-MISSOURI	135
Feit, Robert M	ST. LOUIS METROP.	190
Feldman, David	ST. LOUIS METROP.	190
Feldman, Mark R	ST CHARLES-LINCOLN	189
Feliciano, Wilfrido C	ST. LOUIS METROP.	190
Felix, Robt H	ST. LOUIS METROP.	190
Felker, C. Edward III	SEMO	202
Felker, J. Russell	CAPE GIRARDEAU	042
Feller, Harold H	ST. LOUIS METROP.	190
Felts, James A	MID-MISSOURI	135
Felts, James A	ST. LOUIS METROP.	190
Feltz, Lawrence W	PERRY-STE GENEVIEVE	174
Ferber, Alan J	METRO MED	125
Ferguson, Donald S	METRO MED	125
Ferguson, John L	GREENE	082
Ferguson, John F	GREENE	082
Ferguson, John P	GREENE	082
Ferguson, Robt M	JASPER	102
Ferguson, Thos B	ST. LOUIS METROP.	190
Fernandez, Fernando	BUCHANAN	030
Fernandez, Mark A	METRO MED	125
Ferneau, James E	BOONE	026
Ferns, Francis E	METRO MED	125
Ferrara, Robert P	ST. LOUIS METROP.	190
Ferrari, Heriberto A	BOONE	026
Ferrell, Thos E	GREENE	082
Ferrendelli, James A	ST. LOUIS METROP.	190
Ferris, Carl R	METRO MED	125
Ferris, Charles W Jr.	ST. LOUIS METROP.	190
Ferris, Robert E	COLE	058
Ferry, Richard J	ST. LOUIS METROP.	190
Fibuch, Eugene E	METRO MED	125
Figueroa, Edduyn	ST. LOUIS METROP.	190
Figueroa, Eliseo O	ST. LOUIS METROP.	190
Fingert, Hyman H	ST. LOUIS METROP.	190
Fink, Leroy L	ST. LOUIS METROP.	190
Fink, Roger L	GREENE	082
Finkel, Barney W	ST. LOUIS METROP.	190
Finnegan, Jos V	ST. LOUIS METROP.	190
Fiordelisi, Rocco J	ST. LOUIS METROP.	190
Fiore, Andrew C	ST. LOUIS METROP.	190
Fischbein, Lewis C	ST. LOUIS METROP.	190
Fischer, Edward H	CLAY-PLATTE	050
Fischer, John R	ST. LOUIS METROP.	190
Fischer, Robert	ST. LOUIS METROP.	190
Fish, Virgil O	ST. LOUIS METROP.	190
Fish, William W	CLAY-PLATTE	050
Fisher, James K	METRO MED	125
Fisher, Jos L	BUCHANAN	030
Fisher, Linda	ST. LOUIS METROP.	190
Fitch, Coy O	ST. LOUIS METROP.	190
Fitz, John R	MINERAL AREA	138
Fitzgerald, Robert H	METRO MED	125
FitzSimmons, James G	METRO MED	125
Fivian, Gerald J	ST. LOUIS METROP.	190
Flance, Israel J	ST. LOUIS METROP.	190
Flanders, Virgil E	CLAY-PLATTE	050
Flatley, John A	METRO MED	125
Fleck, Janet M	BUCHANAN	030
Fleishman, Alfred	ST. LOUIS METROP.	190
Fleming, Allan R	METRO MED	125
Fleming, David A	C-M-M-R	046
Fleming, J. Will Jr	C-M-M-R	046
Fleming, Robt J	ST CHARLES-LINCOLN	189
Fleshman, James W	ST. LOUIS METROP.	190
Fletcher, Robert C	METRO MED	125
Fletes, James W	ST. LOUIS METROP.	190
Flicker, Michele R	METRO MED	125
Florendo, Federico N	NORTHEAST	150
Florendo, Purificacion T	NORTHEAST	150

---

*Doctor of osteopathy

Flores, Jhonson E	ST. LOUIS METROP.	190
Floro, Kenneth E Jr.	ST. LOUIS METROP.	190
Floro, Mariano N	ST. LOUIS METROP.	190
Flotte, Bernard H	ST. LOUIS METROP.	190
Flotte, Sylvester A	ST. LOUIS METROP.	190
Flug, Eric J	ST. LOUIS METROP.	190
Flury, Kirk E	ST. LOUIS METROP.	190
Flye, M. Wayne	ST. LOUIS METROP.	190
Flynn, Edward	ST. LOUIS METROP.	190
Flynn, James M	METRO MED	125
Flynn, John T	ST. LOUIS METROP.	190
Fogarty, William M Jr.	ST. LOUIS METROP.	190
Fogel, Steven T	METRO MED	125
Fogle, Philip R	GREENE	082
Folck, Wm P	METRO MED	125
Foley, Jonathon K	CAPE GIRARDEAU	042
Folkner, Albert L	JOHNSON	110
Foote, Daniel D	GREENE	082
Foote, Jerry E	BOONE	026
Forand, Joseph M	ST. LOUIS METROP.	190
Ford, Lee T	ST. LOUIS METROP.	190
Ford, Thomas E	ST. LOUIS METROP.	190
Foreman, Phillip B	NORTHEAST	150
Forgue, Donald R	METRO MED	125
Forman, Louis H	METRO MED	125
Forney, Joseph W	AUDRAIN	014
Forsman, Waldo W	ST. LOUIS METROP.	190
Forsyth, B. Todd	ST. LOUIS METROP.	190
Forsythe, Lees C	METRO MED	125
Forsythe, Robert W	METRO MED	125
Fortin, Don G	CLAY-PLATTE	050
Fortin, Felix D	METRO MED	125
Fortin, Jorge A	MID-MISSOURI	135
Foster, R. Steve	PETTIS	178
Fotopoulos, Chris K	LAKE OF THE OZARKS	120
Fouts, Dallas B	METRO MED	125
Fowler, Fred D	METRO MED	125
Fowler, I C	CLAY-PLATTE	050
Fowler, James W	METRO MED	125
Fowler, Marvin L	SOUTH CENTRAL	206
Fox, Gerald E	BUCHANAN	030
Fox, Leon J	ST. LOUIS METROP.	190
Fox, Robert E	ST. LOUIS METROP.	190
Fox, Thomas J	ST. LOUIS METROP.	190
Foy, Thomas M	JEFFERSON	106
Francis, Roger A	LAKE OF THE OZARKS	120
Francisco, Clarence B	METRO MED	125
Francisco, Dominic S	ST. LOUIS METROP.	190
Frank, Bruce S	ST CHARLES-LINCOLN	189
Frank, Gael R	PETTIS	178
*Frank, Robert A	METRO MED	125
Franklin, Harold A	ST. LOUIS METROP.	190
Franklin, Max S	ST. LOUIS METROP.	190
Franks, Elliott L	METRO MED	125
Frantz, David W	ST. LOUIS METROP.	190
Fraser, Danl M	ST. LOUIS METROP.	190
Fraser, Richard A	B-W-R-C	034
Frawley, Thos F	ST. LOUIS METROP.	190
Frazier, Robt L	SEMO	202
Frazier, Robt E	BOONE	026
*Frederick, Mark R	COLE	058
Frederick, Raymond O	ST. LOUIS METROP.	190
Frederickson, Neil W	ST. LOUIS METROP.	190
Fredrickson, John M	ST. LOUIS METROP.	190
Freedman, Ruth S	ST. LOUIS METROP.	190
Freeman, James A	BOONE	026
Freeman, Jerry C	METRO MED	125
Freeman, Mark E	ST. LOUIS-RESIDENTS	195
Freeman, Michael R	CAPE GIRARDEAU	042
Freiden, Floyd J	METRO MED	125
Freiman, Paul C	GREENE	082
Frein, Donald E	WEST CENTRAL	214
French, M. Devonne	METRO MED	125
Fried, John S	METRO MED	125
Friedman, Morris L	METRO MED	125
Friedman, Paul L	ST. LOUIS METROP.	190
Friedman, Robt H	ST. LOUIS METROP.	190
Friedman, William H	ST. LOUIS METROP.	190
Friedrich, Anthony P	ST. LOUIS METROP.	190
Fries, John W	ST. LOUIS METROP.	190
Friesen, Randall G	ST CHARLES-LINCOLN	189
Fritsch, Andrew J	JASPER	102
Fritzlen, Thos J	METRO MED	125
Froehlich, Thomas W	GREENE	082
Frogge, Jim D	JASPER	102
Frumson, Guy H	ST. LOUIS METROP.	190
Fry, Robert D	ST. LOUIS METROP.	190
Fuchs, Geo J	BOONE	026
Fuhrman, Donald L	METRO MED	125
Fuleihan, Farid M	ST. LOUIS METROP.	190
Fulks, Richard B	COLE	058
Fuller, Terry A	ST. LOUIS METROP.	190
Funsch, Robert E	ST. LOUIS METROP.	190
Furla, August J	ST. LOUIS METROP.	190
Furlong, Lawrence D	METRO MED	125

G

Gaba, James E	METRO MED	125
Gabrawy, Laila G	ST. LOUIS METROP.	190
Gado, Mokhtar H	ST. LOUIS METROP.	190
Gaffney, Jon W	BUCHANAN	030
Gafford, Franklin H IV	ST. LOUIS METROP.	190
Gagliardo, Joseph	ST. LOUIS METROP.	190
Gaines, Robert W	BOONE	026
Gainor, Barry J	BOONE	026
Gaitonde, Mangesh R	BOONE	026
Galakatos, Andrew E	ST. LOUIS METROP.	190
Galant, Mark R	METRO MED	125
Galblum, Larry I	METRO MED	125
Galbreath, Ashford M	METRO MED	125
*Galdamez, John T	LAKE OF THE OZARKS	120
Gale, Arthur H	ST. LOUIS METROP.	190
Gale, Joseph F	GRAND RIVER	078
Galinsky, Leon J	OZARKS	166
Gall, Ira C	ST. LOUIS METROP.	190
Gallagher, Lionel M	COLE	058
Galvez, Sisenando P	GRAND RIVER	078
Gandlmayr, Jack M	ST. LOUIS METROP.	190
Gans, Lawrence A	ST. LOUIS METROP.	190
Gansloser, Wilbert M	ST. LOUIS METROP.	190
Garcia, Chas L	AUDRAIN	014
Garcia, Delia M	ST. LOUIS METROP.	190
Garcia-Ferrer, Eduardo A	ST. LOUIS METROP.	190
Garcia-Ferrer, Eduardo L	ST. LOUIS METROP.	190
Gard, Raymond F	METRO MED	125
Gardner, Joe A	JASPER	102
Gardner, Jos W	OZARKS	166
Garfinkel, Bernard T	ST. LOUIS METROP.	190
Garfinkel, Lester S	METRO MED	125
Garner, James H	METRO MED	125
Garrett, Elizabeth A	BOONE	026
Garrett, Ted E	ST. LOUIS METROP.	190
Garrett, Thomas H	LAKE OF THE OZARKS	120
Garriga, Francisco J	ST. LOUIS METROP.	190
Garrison, David L	BUCHANAN	030
Garrison, Roy F	METRO MED	125
Garrison, Theodore W	LAKE OF THE OZARKS	120
Garrotto, Lewis J	BOONE	026
Garvin, Charles F	ST. LOUIS METROP.	190
Garvin, Paul J	ST. LOUIS METROP.	190
Garvin, Todd J	ST. LOUIS METROP.	190
Garwood, Jan D	WEST CENTRAL	214
Gaska, Walter J	GREENE	082
Gaskin, Fred W	ST. LOUIS METROP.	190
Gaskins, John H	METRO MED	125
Gauer, Robt J	CLAY-PLATTE	050
Gauthier, Charles P	METRO MED	125
Gavankar, Sharad S	JASPER	102
Gavini, Rajendra R	ST. LOUIS METROP.	190
Gay, John W	BOONE	026
*Gayle, David R	B-W-R-C	034
*Gayle, Richard E	B-W-R-C	034
Gearhart, Merriam	GRAND RIVER	078
Gearhart, Wilbur H	ST. LOUIS METROP.	190
Gedney, Wm P	ST. LOUIS METROP.	190
Gehm, Louis E	WEST CENTRAL	214
Geier, Larry J	METRO MED	125
Geiger, Wm A Jr.	METRO MED	125
Geise, August W	ST. LOUIS METROP.	190
Geisman, Richard A	ST CHARLES-LINCOLN	189
Geisse, Guillermo	ST. LOUIS METROP.	190
Gellman, Elliot F	ST. LOUIS METROP.	190
Gennaoui, Jad M	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Gentry, Jim	GREENE	082
Gentry, Marvin C	SOUTH CENTRAL	206
Gentry, Michael A	GREENE	082
Gentsch, Kenneth W	ST. LOUIS METROP.	190
George, Philip G	ST. LOUIS METROP.	190
Geraghty, Thomas E	METRO MED	125
Gerber, William R	ST. LOUIS METROP.	190
Gerdes, John A	GREENE	082
Gerdes, K. Eric	GREENE	082
Gerecht, Wolfe B	GREENE	082
Gerhardt, Donald C	BOONE	026
German, Walter A	GREENE	082
Germann, Donald R	METRO MED	125
Gernstetter, S L	B-W-R-C	034
Gerowin, Lance	ST. LOUIS METROP.	190
Gerst, Aloysius C	ST. LOUIS METROP.	190
Gessler, James A	GREENE	082
Geter, Rodney K	GREENE	082
Gholkar, Vijay R	METRO MED	125
Ghosh, Nellie	ST. LOUIS METROP.	190
Giangiacomo, Joseph	BOONE	026
Gibbons, Robert T Jr.	METRO MED	125
Gibson, David M	METRO MED	125
Gibson, James D	GREENE	082
Gibson, Paul H	ST. LOUIS METROP.	190
Giddings, Frank C	GREENE	082
Gieselman, Ralph V	ST. LOUIS METROP.	190
Gieselmann, James W	B-W-R-C	034
*Giffen, Lawrence E	COLE	058
Gifford, David L	AUDRAIN	014
Gilden, Jerome J	ST. LOUIS METROP.	190
Gile, Robert J	CAPE GIRARDEAU	042
Gill, Paul J	GREENE	082
Gillispie, Jack	TRI-LAKES	208
Gillispie, John J	TRI-LAKES	208
Gilpin, Doris C	ST. LOUIS METROP.	190
Gilula, Louis A	ST. LOUIS METROP.	190
Gimpelson, Richard J	ST. LOUIS METROP.	190
Ginardi, Donald E	METRO MED	125
Ginsberg, B. William	METRO MED	125
Ginsburg, Jordan H	ST. LOUIS METROP.	190
Ginther, James W Jr.	ST. LOUIS METROP.	190
Giorgi, Lee V	METRO MED	125
Gish, E R	CALLAWAY	038
Givler, Robt L	METRO MED	125
Gladney, John H	ST. LOUIS METROP.	190
Glaser, Larry F	METRO MED	125
Glass, Wm J	OZARKS	166
Glasscock, Ernest L	METRO MED	125
Glazer, Harvey S	ST. LOUIS METROP.	190
Glazer, Melvin L	METRO MED	125
Glazzard, Charles D	GREENE	082
Glenn, Edward A	PIKE	186
Glenn, Theodore J	CAPE GIRARDEAU	042
Glenski, James A	METRO MED	125
Glickman, Andrew S	NORTHEAST	150
Glines, Michael H	ST. LOUIS METROP.	190
Glogovac, S. Vic	ST. LOUIS METROP.	190
Glover, David	JOHNSON	110
Glover, Kenneth	OZARKS	166
Glueck, Robert M	METRO MED	125
Gnade, Albert J	ST. LOUIS METROP.	190
Godar, Sharon A	ST. LOUIS METROP.	190
Goebel, Joan M	ST. LOUIS METROP.	190
Goebel, Joel A	ST. LOUIS METROP.	190
Goeking, C Keith	BUCHANAN	030
Goell, Robert S	ST. LOUIS METROP.	190
Goerz, Ann A	METRO MED	125
Goerz, Royal D	METRO MED	125
Goetz, Joseph J	METRO MED	125
Goetz, Kenneth L	METRO MED	125
Goff, John E	JASPER	102
Goheen, John R	METRO MED	125
Gold, Carl G	BOONE-RESIDENT SEC.	027
Gold, Jonathan A	ST. LOUIS METROP.	190
Golden, Samuel E	GREENE	082
Goldfarb, Alvin	ST. LOUIS METROP.	190
Goldkamp, John D	ST CHARLES-LINCOLN	189
Goldman, Arnold M	ST. LOUIS METROP.	190
Goldman, Barry C	METRO MED	125
Goldman, Gordon M	ST. LOUIS METROP.	190
Goldman, Hyman J	ST. LOUIS METROP.	190
Goldman, Melvin L	ST. LOUIS METROP.	190
Goldman, Stanley L	METRO MED	125
Goldring, David	ST. LOUIS METROP.	190
Goldring, Sidney	ST. LOUIS METROP.	190
Goldsich, Edward	METRO MED	125
Goldstein, Benjamin	ST. LOUIS METROP.	190
Goldstein, David E	BOONE	026
Goldstein, Marcy A	ST. LOUIS METROP.	190
Goldstein, Marvin F	METRO MED	125
Goltschman, John P	ST. LOUIS METROP.	190
Gomez, Cesar A	ST. LOUIS METROP.	190
Gondring, William H	BUCHANAN	030
Gonzales, Jose H	PERRY-STE GENEVIEVE	174
Gonzalez, Alicia D	ST. LOUIS METROP.	190
Gonzalez, Mario G	JOHNSON	110
Good, Thomas H	METRO MED	125
Goodenberger, Daniel M	ST. LOUIS METROP.	190
Goodman, Douglas E	GREENE	082
Goodman, Nathaniel	ST. LOUIS METROP.	190
Goodrich, Steven D	ST. LOUIS METROP.	190
Goodwin, J. Wendall	GREENE	082
Goolsbee, Robt L	METRO MED	125
Goran, David A	ST. LOUIS METROP.	190
Gordon, Bruce J	BOONE	026
Gordon, Glenn L	ST. LOUIS METROP.	190
Gordon, James M	ST. LOUIS METROP.	190
Gordon, James S	COLE	058
Gordon, Mark E	CLAY-PLATTE	050
*Gordon, Stephen M	METRO MED	125
Gose, Don F	GREENE	082
Gotti, Edward W	GREENE	082
Gottlieb, Charlene C	ST. LOUIS METROP.	190
Gottsch, Joseph C	METRO MED	125
Gould, Ronald J	ST. LOUIS METROP.	190
Gowda, Siddhesh	ST. LOUIS METROP.	190
Gowdamarajan, Rengasamy	METRO MED	125
Grable, James D	CAPE GIRARDEAU	042
Grace, Steve	GREENE	082
Grady, Ronald K	ST. LOUIS METROP.	190
Graham, Bruce D	METRO MED	125
Graham, Joseph M	JASPER	102
Graham, Patrick G	METRO MED	125
Graham, Wallace H	METRO MED	125
Grand, M. Gilbert	ST. LOUIS METROP.	190
Grant, John M	ST. LOUIS METROP.	190
Grant, Mark	BOONE	026
Grant, Neville	ST. LOUIS METROP.	190
Grant, Ruth	GREENE	082
Grant, William M	BUCHANAN	030
*Grassle, Donna M	METRO MED	125
Graul, Walter P	ST. LOUIS METROP.	190
Graves, Kathleen L	GREENE	082
Graviss, Edward R	ST. LOUIS METROP.	190
Gray, Gary J	ST. LOUIS METROP.	190
Grebe, T. Keith	JASPER	102
Grechus, John J	METRO MED	125
Green, J. Richard	METRO MED	125
Green, Morton R	ST. LOUIS METROP.	190
Green, Thomas F	METRO MED	125
Green, Wm R	ST. LOUIS METROP.	190
Greenberg, Benjamin E	TRI-LAKES	208
Greene, Harry L	NORTHEAST	150
Greenlaw, Cal W	GRAND RIVER	078
Greenlund, Nelson C	WEST CENTRAL	214
*Greenspan, Peter B	METRO MED	125
Greenwald, James E	ST. LOUIS METROP.	190
Gregory, John G	ST. LOUIS METROP.	190
Gresick, Robert J Jr.	ST. LOUIS METROP.	190
Gresick, Robt J	ST. LOUIS METROP.	190
Grewal, Narinder S	BUCHANAN	030
Griesemer, Bernard A	GREENE	082
Griffin, Anthony C	ST. LOUIS METROP.	190
Griffin, Darrell L	MINERAL AREA	138
Griffin, Donald R	METRO MED	125
Griffin, M E	D-H-P-D	066
Griffin, Olin A	D-H-P-D	066
Griffin, Wm T	BOONE	026
Griffith, S Kent	CAPE GIRARDEAU	042
Grim, Edward M	JASPER	102
Grimes, Elwyn M	METRO MED	125
Grimes, Manning E	BUCHANAN	030
Grisham, Thomas D	F-G-W	074
Grix, Gary J	MINERAL AREA	138
Groce, Geo D	CALLAWAY	038

---

*Doctor of osteopathy

Groshong, Ted D	BOONE	026
Growdon, John A	METRO MED	125
Grubb, Robt L	ST. LOUIS METROP.	190
Gruenebaum, Michael I	METRO MED	125
Grundmann, Wm H	ST. LOUIS METROP.	190
Grunt, Jerome A	METRO MED	125
Guastello, Joseph R	METRO MED	125
Guastello, Mario J	METRO MED	125
*Guenthner, Brenda L	BOONE	026
Guerra, Gaston G	METRO MED	125
Guhleman, Henry V	COLE	058
Gujarati, Subhash B	B-W-R-C	034
Gulick, C. Richard	ST. LOUIS METROP.	190
Gumerlock, Mary K	BOONE	026
Gundle, Sigmund	METRO MED	125
Gunn, Jack	LAKE OF THE OZARKS	120
Gunn, Richard W	METRO MED	125
Gunn, Victoria	COLE	058
Gunn, Walter T	ST. LOUIS METROP.	190
Gunnoe, Robert E	METRO MED	125
Gunter, Joe S	BUCHANAN	030
Gupta, Jitendra K	ST. LOUIS METROP.	190
Gupta, Mala R	METRO MED	125
Gupta, Nilakshi	BOONE	026
Gura, George M JR.	METRO MED	125
Gurba, Danny M	METRO MED	125
Gurian, Lawrence E	GREENE	082
Gursahani, Mohan	ST. LOUIS METROP.	190
Gurucharri, Vincent P	BOONE	026
Gustafson, Jon E	METRO MED	125
Gutek, E. Philip	METRO MED	125
Gutierrez, Anthony C	METRO MED	125
Gutierrez-Medina, Ernesto	ST. LOUIS METROP.	190
Gutknecht, Richard	METRO MED	125
Gutwein, Michael B	ST. LOUIS METROP.	190
Gutzmer, Ernest W	GREENE	082
Guy, Cynthia S	ST. LOUIS METROP.	190
Guyer, Emily	BOONE	026
Guyol, William B Jr.	ST. LOUIS METROP.	190
Guze, Saml B	ST. LOUIS METROP.	190
Gwin, Edward	GREENE	082

H

H'Doubler, Charles	GREENE	082
H'Doubler, Francis T	GREENE	082
H'Doubler, Peter B	GREENE	082
Ha, Richard J	NORTHEAST	150
Haas, Harry D	METRO MED	125
Haas, Robert W	CLAY-PLATTE	050
Habermann, James H	JASPER	102
Habert, Edward R	ST. LOUIS METROP.	190
Habib, Henry N	METRO MED	125
Habiger, Thomas G	GREENE	082
Hacker, Douglas A	GREENE	082
Hackett, Earl R	GREENE	082
Haddock, James N	ST. LOUIS METROP.	190
Haddow, Alastair D	GREENE	082
Hagan, John C III	CLAY-PLATTE	050
Hagebusch, Omer E	ST. LOUIS METROP.	190
Hagemann, Paul O	ST. LOUIS METROP.	190
Hagen, Douglas W	METRO MED	125
Hagen, Duane Q	ST. LOUIS METROP.	190
Hagen, Garrett A	ST. LOUIS METROP.	190
Haggerty, Jesse C III	ST. LOUIS METROP.	190
Hahn, Bruce H	METRO MED	125
Hahn, Frederick W	METRO MED	125
Hahn, Yoram	ST. LOUIS METROP.	190
Haight, J. Max	METRO MED	125
Haith, Walter F	METRO MED	125
Hale, Thomas H	ST. LOUIS METROP.	190
Halford, Richard	ST. LOUIS METROP.	190
Hall, David G III	BOONE	026
Hall, David W	GREENE	082
Hall, Durward G	GREENE	082
*Hall, Frederick K	METRO MED	125
Hall, John C	METRO MED	125
*Hall, John P	CAPE GIRARDEAU	042
Hall, Preston C	ST. LOUIS METROP.	190
Hall, Robt T	METRO MED	125
Hall, Stanley G	NORTHEAST	150
Hall, Terry E	GRAND RIVER	078
Hallaba, M. A. S.	JASPER	102
Halley, R H	ST. LOUIS METROP.	190
Halloran, Mark J	ST. LOUIS METROP.	190
Halperin, Phillip H	METRO MED	125
Halpin, Stephen E	NORTHEAST	150
Halverson, John D	ST. LOUIS METROP.	190
Halverson, Larry W	GREENE	082
Hamburg, Eric D	MINERAL AREA	138
Hamburg, Frederic L	GREENE	082
Hamburg, Mitchell S	METRO MED	125
Hamburger, Stephen C	METRO MED	125
Hamid, Rashid S	SALINE	198
Hamill, Robert W	METRO MED	125
Hamilton, Caldwell K	ST. LOUIS METROP.	190
Hamilton, Eugene G	ST. LOUIS METROP.	190
Hamilton, William P	ST. LOUIS METROP.	190
*Hamilton, William V	CLAY-PLATTE	050
Hamilton, Wm P	OZARKS	166
Hamlin, Wyeth	NORTHEAST	150
Hammerman, Albert M	ST. LOUIS METROP.	190
Hammerman, Harley J	ST. LOUIS METROP.	190
Hammerman, Marc R	ST. LOUIS METROP.	190
Hammond, D. Wade	ST. LOUIS METROP.	190
Hammond, David T	ST. LOUIS METROP.	190
Hampton, Stanley F	ST. LOUIS METROP.	190
Hanaway, Jos	ST. LOUIS METROP.	190
*Hancock, Thomas J	COLE	058
Handler, Fred P	COLE	058
Handler, Michael R	ST. LOUIS METROP.	190
Hanes, Lily A	ST. LOUIS METROP.	190
Hanks, Michael S	GREENE	082
Hanley, Thomas P	ST. LOUIS METROP.	190
Hanna, Hugh A	JOHNSON	110
Hannah, Hamner III	METRO MED	125
Hannas, Ralston R	METRO MED	125
Hansbrough, Eugene C	B-W-R-C	034
Hansbrough, Eugene T	B-W-R-C	034
Hansen, Thomas L	METRO MED	125
Hanson, E J	METRO MED	125
Hanson, Karl H	METRO MED	125
*Hanson, Lesley A	ST. LOUIS METROP.	190
Hanss, Armand W	GREENE	082
Hantman, Stephen L	ST. LOUIS METROP.	190
Hanto, Douglas W	ST. LOUIS METROP.	190
Hantz, Oscar	ST. LOUIS METROP.	190
Harbrecht, James J	METRO MED	125
Hardacre, Ruth A	METRO MED	125
Hardin, David B	BOONE	026
Hardin, Wm B	ST. LOUIS METROP.	190
Harding, Clarke T	ST CHARLES-LINCOLN	189
Hardman, William A	GREENE	082
Hardy, David A	ST. LOUIS METROP.	190
Hardy, Guerdan	ST. LOUIS METROP.	190
Hardy, Henry M	METRO MED	125
Hardy, Jeffery A	ST. LOUIS METROP.	190
Hardy, John W	METRO MED	125
Hardy, Patrick J	ST. LOUIS METROP.	190
Hardy, Samuel W	ST. LOUIS METROP.	190
Hardy, Stanton L	MINERAL AREA	138
Harell, Alex	ST. LOUIS METROP.	190
Harford, Carl G	ST. LOUIS METROP.	190
Hargis, James L	GREENE	082
Hari, Magaral S	JASPER	102
Harless, Morris S	METRO MED	125
Harlow, Richard J Jr	METRO MED	125
Harmon, Ben C	GREENE	082
Harmon, Robert G	COLE	058
Harms, James F	WEST CENTRAL	214
Harms, Lawrence L	C-M-M-R	046
Harner, Casper G	BUCHANAN	030
Harper, Fleming B	ST. LOUIS METROP.	190
Harpster, Gene O	CLAY-PLATTE	050
Harr, Patrick B	NORTHWEST	158
Harris, David J	METRO MED	125
Harris, Hugh S Jr.	BOONE	026
Harris, Hugh G	GREENE	082
Harris, Lanny W	METRO MED	125
Harris, Robt J	BOONE	026
Harris, Weldon L	METRO MED	125
Harrison, Garth F	METRO MED	125
Harrison, Lee B	ST. LOUIS METROP.	190
Harrison, Phil W	JASPER	102
Harrison, Richard L	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Harrison, Thomas J Jr.	SEMO	202
Harrison, Winston E	BOONE	026
Harshman, David M	ST. LOUIS METROP.	190
Hart, L. Wayne	METRO MEO	125
Hart, William G Jr.	ST. LOUIS METROP.	190
Hart, William M Jr.	ST. LOUIS METROP.	190
Hartman, Paul T	ST. LOUIS METROP.	190
Hartman, Richard A	ST. LOUIS METROP.	190
Hartman, Rodney C	PETTIS	178
Hartnett, Anna E	ST. LOUIS METROP.	190
Hartnett, Thos O	ST. LOUIS METROP.	190
Hartstein, Jack	ST. LOUIS METROP.	190
Hartwig, Frederick H	METRO MED	125
Hartwig, Raymond W	METRO MEO	125
Hartzler, Geoffrey O	METRO MEO	125
Harvey, Harold O	GREENE	082
Harvey, Judith E	GREENE	082
Harwell, J. Larry	ST. LOUIS METROP.	190
Hasek, James A	SOUTH CENTRAL	206
Hasenmueller, James J	ST. LOUIS METROP.	190
Hasik, Karl J	ST. LOUIS METROP.	190
Hasler, Galen R	GREENE	082
Hatfalvi, Bela I	ST. LOUIS METROP.	190
Hatlelid, J. Michael	ST. LOUIS METROP.	190
Hatlelid, R. Robert	JASPER	102
Haueisen, David C	ST. LOUIS METROP.	190
Haupt, Herbert A	ST. LOUIS METROP.	190
Hauser, Robert J	COLE	058
Hausheer, Herman J	METRO MEO	125
Havaldar, Kanti L	NORTHWEST	158
Havey, Ann O	BOONE	026
Havey, John	BOONE	026
Haw, Marvin T	BOONE	026
Hawatmeh, Ibrahim S	ST. LOUIS METROP.	190
Hawatmeh, Isam S	ST. LOUIS METROP.	190
Hawk, Bray O	ST. LOUIS METROP.	190
Hawker, Wm O	ST. LOUIS METROP.	190
Hawkins, Calvin O	GREENE	082
Hawkins, Geo L	ST. LOUIS METROP.	190
Hawkins, Stephen L	SOUTH CENTRAL	206
Haycraft, Gordon L	CAPE GIRARDEAU	042
Hayden, Melvin R	LAKE OF THE OZARKS	120
Hayden, Richard E	ST. LOUIS METROP.	190
Hayes, Kimberly W	METRO MEO	125
Hayes, Lawrence L	CLAY-PLATTE	050
Hayes, Nancy J	SOUTH CENTRAL	206
Hayes, Paul W	BUCHANAN	030
Hayes, Stanley P	GREENE	082
Haynie, William W	WEST CENTRAL	214
Hazan, Joseph	ST. LOUIS METROP.	190
Hazel, James G Jr.	PEMISCOT	170
Hazen, Jacalyn E	ST. LOUIS-RESIDENTS	195
Hazen, Robt M	METRO MEO	125
Hazuka, David F	METRO MEO	125
Headrick, John A	ST. LOUIS METROP.	190
Healy, Brian E	METRO MEO	125
Heath, Jimmy D	SEMO	202
Hecker, Jos E	B-W-R-C	034
Hedge, S. Roy	METRO MEO	125
Hedges, Richard C	CLAY-PLATTE	050
Heeb, Max A	SEMO	202
Hegde, Korgi V	ST. LOUIS METROP.	190
*Heim, J. Marcus	LAKE OF THE OZARKS	120
Heimburger, Elizabeth M	BOONE	026
Heimburger, Richard A	BOONE	026
Heins, Oonald E	BUCHANAN	030
Heins, James N	ST. LOUIS METROP.	190
Heinz, George	GREENE	082
Helikson, Mary A	BOONE	026
Hellam, Ouane C	GREENE	082
Heller, Randall L Jr.	ST. LOUIS METROP.	190
Hellerstein, Stanley	METRO MEO	125
Helling, Thomas S	METRO MEO	125
Hellman, Richard	METRO MEO	125
Hellweg, Chas E	OZARKS	166
Hellweg, Raymond W	ST. LOUIS METROP.	190
Helzberg, John H	METRO MEO	125
Hendren, Thos H	CLAY-PLATTE	050
Henry, Clarke L	METRO MEO	125
Henry, Clarke L Jr	METRO MEO	125
Henry, Jos E	CLAY-PLATTE	050
Henry, Lawrence O	COLE	058
Henry, Roy A	GREENE	082
Henson, Bruce E	METRO MED	125
Henzel, John H	BOONE	026
Herdoiza, Alfonso W	METRO MEO	125
Herfkens, Kenneth D	GREENE	082
Herman, Allen I	BUCHANAN	030
Herman, Robert L	METRO MEO	125
Hernandez, J. Humberto	COLE	058
Hernandez, Salvador R	ST. LOUIS METROP.	190
Herriford, Merle B	ST. LOUIS METROP.	190
Herrmann, Virginia M	ST. LOUIS METROP.	190
Hershey, Falls B	ST. LOUIS METROP.	190
Hertel, Ronald C	ST. LOUIS METROP.	190
Hervey, Wm H	METRO MEO	125
Heryer, John W	METRO MEO	125
Herzog, Godofredo M	ST. LOUIS METROP.	190
Herzog, Jacques A	ST. LOUIS METROP.	190
Hesker, Albert E	ST. LOUIS METROP.	190
Hess, John P	ST. LOUIS METROP.	190
Heusler, Anton F	ST. LOUIS METROP.	190
Heutel, Lee B	ST. LOUIS METROP.	190
*Hevel, Robert W	NORTHEAST	150
Hibbard, Blaine Z	METRO MEO	125
Hickey, James L	ST. LOUIS METROP.	190
Hickman, Peri L	METRO MEO	125
Hicks, Frederick G	ST. LOUIS METROP.	190
Hicks, Ralph A	METRO MEO	125
Hicks, Robert S	ST. LOUIS METROP.	190
Hierholzer, Rebecca S	METRO MEO	125
Higgins, Edward F JR	METRO MED	125
Higgins, Michael G	CAPE GIRARDEAU	042
Higgins, Philip C	ST. LOUIS METROP.	190
Higgins, Ronald A	METRO MED	125
Highland, Thomas R	BOONE	026
Hilbert, Paul H	ST. LOUIS METROP.	190
Hildreth, H. Rommel	ST. LOUIS METROP.	190
Hill, Jack H	METRO MED	125
Hill, M. Robert	ST. LOUIS METROP.	190
Hill, Randy C	GREENE	082
Hill, Ronald T	SEMO	202
Hill, XaCadene A	ST. LOUIS METROP.	190
Hills, Joe E	GREENE	082
Hilton, Paul E	JASPER	102
Hinds, Paul A	GREENE	082
Hindupur, Mohan R	BUCHANAN	030
Hink, Frederick W	METRO MED	125
Hinojosa, Luis A	OZARKS	166
Hinrichs, James H	ST. LOUIS METROP.	190
Hinson, Gary W	METRO MEO	125
Hintze, Paul F	ST. LOUIS METROP.	190
Hironimus, John E	ST. LOUIS METROP.	190
Hirshberg, Gary E	ST. LOUIS METROP.	190
Ho, Grinny H	SEMO	202
Ho, Judith E	ST. LOUIS METROP.	190
Hobbs, John E	ST. LOUIS METROP.	190
Hodge, Robt H	CLAY-PLATTE	050
Hodgson, Frank H	METRO MEO	125
Hoech, Geo P	METRO MEO	125
Hoehn, John P III	ST. LOUIS METROP.	190
Hoelscher, Harold F	F-G-W	074
Hoeman, Michael O	GREENE	082
Hoeper, Samuel D	METRO MEO	125
Hoeper, Samuel D Jr.	METRO MED	125
Hof, Oavid G	METRO MEO	125
Hof, Jem J	BOONE	026
*Hoffman, James E	CAPE GIRARDEAU	042
Hoffman, Leanna M	NORTH CENTRAL	162
Hoffman, Mark J	ST. LOUIS METROP.	190
Hoffman, William F	ST. LOUIS METROP.	190
Hoffmann, Alan L	METRO MEO	125
Hoffmann, Lee M	METRO MEO	125
Hoffmann, Ronald E	ST. LOUIS METROP.	190
Hoffmann, Sandra S	ST. LOUIS METROP.	190
Hofmeister, Roger W	BOONE	026
Hofstatter, Leopold	ST. LOUIS METROP.	190
Hogan, Cornelius E	ST. LOUIS METROP.	190
Hogan, John R	ST. LOUIS METROP.	190
Hogan, Patrick C	ST. LOUIS METROP.	190
Hogan, Patrick A	ST. LOUIS METROP.	190
Hoja, W Alex	B-W-R-C	034
Holand, Roy W	GREENE	082
Holcomb, John K	CAPE GIRARDEAU	042
Holder, Barrett K	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Holder, Thos M	METRO MED	125
Holekamp, Timothy	BOONE	026
Holemon, R. Eugene	ST. LOUIS METROP.	190
Holland, Robt D	GREENE	082
Holley, Donald B	LAKE OF THE OZARKS	120
Hollinger, Lloyd A	METRO MED	125
Hollis, Richard W	GREENE	082
Hollo, Vencel W	ST. LOUIS METROP.	190
Hollocher, Richard J	ST. LOUIS METROP.	190
Holloway, Robert B	ST. LOUIS METROP.	190
Holman, Jos G	METRO MED	125
Holmes, Danl E	GREENE	082
Holmes, David R	GREENE	082
Holmes, Nancy E	ST. LOUIS METROP.	190
Holmes, Richard A	BOONE	026
Holt, Wm E	ST. LOUIS METROP.	190
Holtmann, Barbel	ST. LOUIS METROP.	190
Holton, Edward B	METRO MED	125
Holtz, Alan S	ST. LOUIS METROP.	190
Holtz, Sumner	ST. LOUIS METROP.	190
Honaas, Trygve O	CAPE GIRARDEAU	042
*Honderick, Richard T	GREENE	082
Hookerman, Bruce J	ST. LOUIS METROP.	190
Hooper, Anthony C	ST. LOUIS METROP.	190
Hoos, Gary L	GREENE	082
Hooshmand, Ahmad	COLE	058
Hopkins, James P	METRO MED	125
Hopkins, Thomas S	PETTIS	178
Hopkins, Thos J	PETTIS	178
Horan, John J Jr.	ST. LOUIS METROP.	190
Horenstein, Simon	ST. LOUIS METROP.	190
Horine, Jon A	METRO MED	125
Horn, Paul C	CAPE GIRARDEAU	042
Hornbostel, Phillip M	PETTIS	178
Horner, John L	ST. LOUIS METROP.	190
Hornig, Gregory W	METRO MED	125
Hornstra, Robijn K	METRO MED	125
Horochowski, Alejandro	PETTIS	178
Horton, Bill G	GREENE	082
Horton, James D	GREENE	082
Horwitz, Irwin B	ST. LOUIS METROP.	190
Hoskins, R. Bruce	METRO MED	125
Hosler, Mark W	CAPE GIRARDEAU	042
Houck, William E	ST. LOUIS METROP.	190
Houserman, Virginia L	ST. LOUIS METROP.	190
Houttuin, Erik	JEFFERSON	106
Hover, Alexander R	GREENE	082
Howard, Campbell P	METRO MED	125
Howe, Albert L	ST. LOUIS METROP.	190
Howell, Billy D	GRAND RIVER	078
Howitt, William J	GREENE	082
Hoxworth, Gerald M	AUDRAIN	014
Hoye, Robert C	PERRY-STE GENEVIEVE	174
Hoyt, Terry S	BOONE	026
Hrnicek, Gary E	GREENE	082
Hruska, Keith A	ST. LOUIS METROP.	190
Hruza, George J	ST. LOUIS METROP.	190
Hu, Raymond J	ST CHARLES-LINCOLN	189
Hubbard, Sally L	GREENE	082
Hubbell, Marius M Jr.	METRO MED	125
Huber, Lasley E	C-M-M-R	046
Hubert, John P Jr.	ST. LOUIS METROP.	190
Hunter, James K Jr.	NORTHWEST	158
Hunter, James G	CLAY-PLATTE	050
Huntington, Ione	OZARKS	166
Hunzicker, Warren J	METRO MED	125
Huq, MD N	AUDRAIN	014
Hurley, Joseph J	ST. LOUIS METROP.	190
Hurst, Wilfred W	JASPER	102
Husain, S. Arshad	BOONE	026
Huse, William J II	METRO MED	125
Huss, Randall D	MID-MISSOURI	135
Hustead, Russell M	METRO MED	125
Hustead, Virginia A	METRO MED	125
Husted, Frederick C	GREENE	082
Huster, Robert M	MID-MISSOURI	135
Huston, Kent A	METRO MED	125
Hutchinson, James H	ST. LOUIS METROP.	190
Hutchinson, William B	ST. LOUIS METROP.	190
Hyde, Lawrence L	METRO MED	125
Hyde, Rita M	METRO MED	125
Hubert, John W	ST. LOUIS METROP.	190
Huck, Richard F Jr.	ST. LOUIS METROP.	190
Huckstep, Robt A	MINERAL AREA	138
Hudgens, Richard W	ST. LOUIS METROP.	190
Huet-Vaughn, Yolanda	METRO MED	125
Huewe, Douglas A	GREENE	082
Huff, Kalaichelvi R	JASPER	102
Huffaker, William H	ST. LOUIS METROP.	190
Huffman, Thos L	SOUTH CENTRAL	206
Hufft, Robert E Jr	GREENE	082
Huggins, Albert M	ST. LOUIS METROP.	190
Hughes, Derek	BOONE	026
Hughes, Judson M	BUCHANAN	030
Hughes, Michael F	METRO MED	125
Hughes, Robt G	ST. LOUIS METROP.	190
Hulbert, Bernard	ST. LOUIS METROP.	190
Hulbert, Laura R	ST. LOUIS METROP.	190
Hull, Timothy A	METRO MED	125
Hulstra, Johannes F	GREENE	082
Hummel, Anton J	ST. LOUIS METROP.	190
Hummel, Wm C	ST. LOUIS METROP.	190
Humphrey, James D	NORTHWEST	158
Humphreys, Edward T	BOONE	026
Hunkeler, John D	METRO MED	125
Hunleth, Frank E	ST. LOUIS METROP.	190
Hunsley, Perry U	TRI-LAKES	208
Hunt, John L	B-W-R-C	034
Hunt, Robert S	CAPE GIRARDEAU	042
*Hunter, Harlen C	ST. LOUIS METROP.	190

I

Ibarra, Guillermo	METRO MED	125
Icaza, Ramiro	CAPE GIRARDEAU	042
Ide, Carl H	BOONE	026
Ide, Lucien W	BUCHANAN	030
Ikeda, Shigemasa	ST. LOUIS METROP.	190
Imes, Elvin D	NORTHWEST	158
Inciardi, Marc F	METRO MED	125
Ingham, Walton C	METRO MED	125
Inman, Max M	ST. LOUIS METROP.	190
Inniss, Rosalyn E	METRO MED	125
Inocencio, Eddie C	BUCHANAN	030
Ip, Aidan W	ST. LOUIS METROP.	190
Ippensen, John H	GREENE	082
Irvin, William S	BOONE	026
Irvine, John W	METRO MED	125
Irwig, Fred	METRO MED	125
Isaac, Anita M	OZARKS	166
Ishida, Yasuo	ST. LOUIS METROP.	190
Isserman, Michael J	ST. LOUIS METROP.	190
Ittner, Geo W	ST. LOUIS METROP.	190
Ivins, Gregory K	CALLAWAY	038
Ivy, H. B.	GREENE	082
Iwane, Akira	ST. LOUIS METROP.	190
Izmirlian, Grant	ST. LOUIS METROP.	190

J

Jablonski, Raymond C	ST. LOUIS METROP.	190
*Jacks, Richard K	BUCHANAN	030
Jackson, Darwin C	ST. LOUIS METROP.	190
Jackson, Mary Anne	METRO MED	125
Jackson, Max G	METRO MED	125
Jackson, Robert L	BOONE	026
Jackson, Roger P	CLAY-PLATTE	050
Jackson, Vernon B	CALLAWAY	038
Jacob, Karl A	ST. LOUIS METROP.	190
Jacob, Kenneth M	METRO MED	125
Jacobs, Allan J	ST. LOUIS METROP.	190
Jacobs, Chas C	ST. LOUIS METROP.	190
Jacobs, Frederick A	ST. LOUIS METROP.	190
Jacobs, Morton	METRO MED	125
Jacobs, Robyn H	METRO MED	125
Jacobs, Walter H	METRO MED	125
Jaeger, Jos N	CAPE GIRARDEAU	042
Jahanian, Iraj	GREENE	082
Jain, Savitri G	ST. LOUIS METROP.	190
Jain, Sumer C	ST. LOUIS METROP.	190
Jamaluddin, Mohideen A	JEFFERSON	106
James, Elizabeth J	BOONE	026
James, Kathleen M	ST CHARLES-LINCOLN	189
James, Otis E	METRO MED	125
James, Ronald C	BOONE	026
Jameson, James E	GREENE	082
Jamroz, Greg A	F-G-W	074

---

*Doctor of osteopathy.

Janeczko, Gregory F	GREENE	082
Janssen, David L	GREENE	082
Jantz, Keith	METRO MED	125
Jarvis, Cathy C	ST. LOUIS METROP.	190
Jarvis, Stephen P	BUCHANAN	030
Jary, Mark L	GREENE	082
Jatala, Ijaz A	ST. LOUIS METROP.	190
Javdan, Ron	ST. LOUIS METROP.	190
Jayanandaiah, Hirematha da	NORTHEAST	150
Jean, J T	ST. LOUIS METROP.	190
Jedlinski, Michael T	CAPE GIRARDEAU	042
Jefferis, Kenneth R	NORTHWEST	158
Jelley, V. Carl	METRO MED	125
Jenab, Morteza J	METRO MED	125
Jenkins, David C	METRO MED	125
Jenkins, Edward R	MID-MISSOURI	135
Jennett, J H	METRO MED	125
Jennett, Richard B	COLE	058
Jenny, Arthur B	ST. LOUIS METROP.	190
Jensen, Joshua E	ST. LOUIS METROP.	190
Jensen, Joshua E II	ST. LOUIS METROP.	190
Jick, Sidney	ST. LOUIS METROP.	190
Jobe, Chas L	GREENE	082
Joffe, Wm S	ST. LOUIS METROP.	190
Johans, Thomas G	ST. LOUIS METROP.	190
Johnson, C. L.	METRO MED	125
Johnson, Chas J	ST. LOUIS METROP.	190
Johnson, Chas S	JOHNSON	110
Johnson, Dallas A	METRO MED	125
Johnson, E D III	CAPE GIRARDEAU	042
Johnson, Earl W	CAPE GIRARDEAU	042
Johnson, Frank E	ST. LOUIS METROP.	190
Johnson, Fritz M	GREENE	082
Johnson, Gareth R	METRO MED	125
Johnson, Gordon L	JEFFERSON	106
Johnson, James S	METRO MED	125
Johnson, Jeffrey R	GREENE	082
Johnson, Jos C Jr	GREENE	082
Johnson, Joseph E	METRO MED	125
Johnson, Joy A	METRO MED	125
Johnson, Lent C	NORTHEAST	150
Johnson, Michael K	ST. LOUIS METROP.	190
Johnson, Randy G	ST. LOUIS METROP.	190
Johnson, Richard E	BOONE	026
Johnson, Richard L	METRO MED	125
Johnson, Robert D	GREENE	082
Johnson, Steven M	ST. LOUIS METROP.	190
Johnson, Thos M	METRO MED	125
Johnson, Tom A	ST. LOUIS METROP.	190
Johnson, Warford B Sr	GREENE	082
Johnson, Warren L JR	METRO MED	125
Johnson, Wm F	GREENE	082
Johnston, Glen P	ST. LOUIS METROP.	190
Johnston, Jos L	GREENE	082
Johnstone, John T	ST. LOUIS METROP.	190
Jolly, Ben L	AUDRAIN	014
Jolly, Benj N	AUDRAIN	014
Jonas, Harry S	METRO MED	125
Jones, Bruce N	ST. LOUIS METROP.	190
Jones, Dorothy J	ST. LOUIS METROP.	190
Jones, Edna M	HENRY	086
Jones, Edward S	WEST CENTRAL	214
Jones, Elizabeth A	METRO MED	125
Jones, Gale O	METRO MED	125
Jones, Georgia A	ST. LOUIS METROP.	190
Jones, Harold L	GREENE	082
Jones, James H	ST. LOUIS METROP.	190
*Jones, James E	ST CHARLES-LINCOLN	189
Jones, Jeffrey T	JASPER	102
Jones, Keith D	JOHNSON	110
Jones, Laird E	GREENE	082
Jones, Lowry Jr.	METRO MED	125
Jones, Maynard C Jr.	METRO MED	125
Jones, Michael D	AUDRAIN	014
Jones, Otey S	ST. LOUIS METROP.	190
Jones, Patricia E	METRO MED	125
Jones, Paul S	JASPER	102
Jones, Randall W	METRO MED	125
Jones, Richard A	ST. LOUIS METROP.	190
Jones, Robert R	WEST CENTRAL	214
Jones, Robert P	METRO MED	125
Jones, Stanley G Jr.	SEMO	202
Jones, T. Reid	METRO MED	125
*Jordan, Earl L Jr	JASPER	102
Jordan, Timothy J	JEFFERSON	106
Joseph, Harold J	ST. LOUIS METROP.	190
Josephson, Aaron M	GREENE	082
Joslyn, Harold L	ST. LOUIS METROP.	190
Jost, Charles A	ST. LOUIS METROP.	190
Jost, R. Gilbert	ST. LOUIS METROP.	190
Jotte, Richard F	ST. LOUIS METROP.	190
Jotte, Richard P	ST. LOUIS METROP.	190
Joyce, Rex M	METRO MED	125
Joyce, Steven T	METRO MED	125
Judd, Donald R	ST. LOUIS METROP.	190
Judge, Mark A	JASPER	102
Judge, Walter T	JEFFERSON	106
Judy, Joseph D	BOONE	026
Juergens, Wm G	ST. LOUIS METROP.	190
Julien, Rene	ST. LOUIS METROP.	190
Jung, Christopher H	CAPE GIRARDEAU	042
Jung, J. Marshall	CAPE GIRARDEAU	042
Junker, James A	JEFFERSON	106
Justus, John B	METRO MED	125

K

Kagan, Stuart M	METRO MED	125
Kahler, Monte R	D-H-P-D	066
Kahn, Joseph A	ST CHARLES-LINCOLN	189
Kahn, Marvin	METRO MED	125
Kairuz, Bartolome C	ST. LOUIS METROP.	190
Kaiser, Geo C	ST. LOUIS METROP.	190
Kaiser, Larry R	ST. LOUIS METROP.	190
Kakaiya, Dilip H	DUNKLIN	070
Kallenbach, Glen P	AUDRAIN	014
Kamada, Tsutomu	ST CHARLES-LINCOLN	189
Kamakas, Nicholas C	ST. LOUIS METROP.	190
Kamath, K.P.S.	CAPE GIRARDEAU	042
Kamel El-Din, Ali S	ST. LOUIS METROP.	190
Kamenetzky, Stephen A	ST. LOUIS METROP.	190
Kaminski, Donald L	ST. LOUIS METROP.	190
Kampfe, Paul W	ST CHARLES-LINCOLN	189
Kampschmidt, Donald L	GRAND RIVER	078
Kanagawa, Harold K	COLE	058
Kanarek, Joseph	METRO MED	125
Kandt, Raymond E	METRO MED	125
Kang, Johanna J	ST. LOUIS METROP.	190
Kang, Juan	ST. LOUIS METROP.	190
Kang, Young M	SOUTH CENTRAL	206
Kanmanthreddy, Vijaya	BUCHANAN	030
Kanne, Marty A	CLAY-PLATTE	050
Kantor, Julius M	METRO MED	125
Kantor, Owen	ST. LOUIS METROP.	190
Kantor, Saml	METRO MED	125
Kaplan, Alex H	ST. LOUIS METROP.	190
Kaplan, Henry J	ST. LOUIS METROP.	190
Kaplan, Michael F	BOONE	026
Kaplan, Paul E	BOONE	026
Kappesser, Netajean G	ST. LOUIS METROP.	190
Kappesser, Roland C	ST. LOUIS METROP.	190
Kardesch, Milton	ST. LOUIS METROP.	190
Karl, Michael M	ST. LOUIS METROP.	190
Karraker, Alvan G	MINERAL AREA	138
Karsh, Robt S	ST. LOUIS METROP.	190
Kartus, Irving	METRO MED	125
Kass, Michael A	ST. LOUIS METROP.	190
Kasten, Mark C	CAPE GIRARDEAU	042
Kasten, Melvin C	CAPE GIRARDEAU	042
Katf, Nicola Y	CLAY-PLATTE	050
Katsantonis, George	ST. LOUIS METROP.	190
Kauffman, Ruth	LAKE OF THE OZARKS	120
Kaufman, Andrew B	METRO MED	125
Kaufman, Robt L	ST. LOUIS METROP.	190
Kaufmann, Herbert H	METRO MED	125
Kauk, Bruce A	CLAY-PLATTE	050
Kaup, Chandra S	ST. LOUIS METROP.	190
Kayanan, Jose C	METRO MED	125
Kayes, Jack	ST. LOUIS METROP.	190
Kays, Kenneth M	C-M-M-R	046
Kaza, Ramarao	ST. LOUIS METROP.	190
Keairnes, Harold W	METRO MED	125
Keating, James P	ST. LOUIS METROP.	190
Keefe, David M	ST CHARLES-LINCOLN	189
Keesal, Dennis	ST CHARLES-LINCOLN	189
Keffler, Karl L	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Keitges, Pierre W*	METRO MED	125
Keller, Maurice J	ST. LOUIS METROP.	190
Keller, Robt M	ST CHARLES-LINCOLN	189
Keller, Stephen M	ST. LOUIS METROP.	190
Kellett, John G	ST. LOUIS METROP.	190
Kelley, Gilbert B	ANDREW	010
Kelling, E. Collyer	GREENE	082
Kelly, Charles R	METRO MED	125
Kelly, John J	ST. LOUIS METROP.	190
Kelly, Joseph G	CLAY-PLATTE	050
Kelly, R E	ST. LOUIS METROP.	190
Keltner, Raymond M Jr.	ST. LOUIS METROP.	190
Keltner, Raymond O	METRO MED	125
Kelty, Maureen A	BUCHANAN	030
Kemp, Michele E	ST. LOUIS METROP.	190
Kendall, Charles A	METRO MED	125
Kendall, Forrest H	METRO MED	125
Kendis, Jos B	ST. LOUIS METROP.	190
Kenneally, Cynthia Z	ST. LOUIS METROP.	190
Kennedy, David G	ST. LOUIS METROP.	190
Kennedy, Timothy D	METRO MED	125
Kennett, Jerry D	BOONE	026
Kenney, Douglas R	HENRY	086
Kenney, John D	ST. LOUIS METROP.	190
Kenney, John D III	METRO MED	125
Kenney, Roy E	OZARKS	166
Kennington, L J	ST. LOUIS METROP.	190
Kensel, Robert S	GREENE	082
Kent, Bela K	METRO MED	125
Keohane, Mark	ST CHARLES-LINCOLN	189
Kerkemeyer, George	NORTHEAST	150
Kerr, Harold H	METRO MED	125
Kessel, James W	ST. LOUIS METROP.	190
Kessler, Sheldon	ST. LOUIS METROP.	190
Kessler, William D Jr.	JASPER	102
Kesssinger, William A	GREENE	082
Ketcherside, W. Joseph	CLAY-PLATTE	050
Ketterman, Grace H	METRO MED	125
Key, James S	GREENE	082
Keyes, Edward L	ST. LOUIS METROP.	190
Khalil, Tamer G	GREENE	082
Khan, Abdul G	ST. LOUIS METROP.	190
Khan, Altaf A	ST. LOUIS METROP.	190
Khan, Khalid I	CAPE GIRARDEAU	042
Kherdekar, Subhash S	OZARKS	166
Khoury, Cecile S	METRO MED	125
Khulusi, Basimah	METRO MED	125
Khurana, Satish K	METRO MED	125
Kibby, Thomas B	ST. LOUIS METROP.	190
Kiburz, Douglas W	PETTIS	178
Kiekhaefer, Theodore C	BUCHANAN	030
Kielmovitch, Izak H	ST. LOUIS METROP.	190
Kienzle, Edward	ST. LOUIS METROP.	190
Kies, Richard L	CAPE GIRARDEAU	042
Kilbride, Howard W	METRO MED	125
Kilgore, John W	ST. LOUIS METROP.	190
Kilker, Donald E	ST. LOUIS METROP.	190
Killen, Duncan A	METRO MED	125
Killion, Linza T	METRO MED	125
Kilo, Chas	ST. LOUIS METROP.	190
Kim, Chul	B-W-R-C	034
Kim, Jin Bai	GREENE	082
Kim, Longius H	MINERAL AREA	138
Kim, Stanley W	ST. LOUIS METROP.	190
Kim, Tae S	JEFFERSON	106
Kim, William W	ST. LOUIS METROP.	190
Kim, Yang H	F-G-W	074
Kim, Yong Kie	CAPE GIRARDEAU	042
Kimball, Merritt H	METRO MED	125
Kimble, Harvey S	METRO MED	125
Kime, Ricky L	OZARKS	166
Kimelman, Nathan	ST. LOUIS METROP.	190
Kimlinger, William R	COLE	058
Kinder, Doyle O	GREENE	082
Kinder, James A	CAPE GIRARDEAU	042
Kinder, Jerry L	CAPE GIRARDEAU	042
Kindred, Lynn H	METRO MED	125
King, Donald K	ST. LOUIS METROP.	190
King, Eustace E III	ST. LOUIS METROP.	190
King, Francis C	ST. LOUIS METROP.	190
King, Gregory S	ST. LOUIS METROP.	190
King, J. Tenbrook	METRO MED	125
King, John V Sr.	ST. LOUIS METROP.	190
King, John V Jr.	ST. LOUIS METROP.	190
King, M. Kenton	ST. LOUIS METROP.	190
King, Richard H	HENRY	086
King, Robert W	MID-MISSOURI	135
King, Robert J	BOONE	026
Kingsbury, Helen	METRO MED	125
Kingsbury, Robt J	ST CHARLES-LINCOLN	189
Kingsland, Robert C	ST. LOUIS METROP.	190
Kinsella, Edward D	ST. LOUIS METROP.	190
Kinsella, Peter W	ST. LOUIS METROP.	190
Kinsella, Ralph A Jr.	ST. LOUIS METROP.	190
Kipfer, Robt E	GREENE	082
Kipnis, David M	ST. LOUIS METROP.	190
Kirkland, Jerry A	CLAY-PLATTE	050
Kissane, John M	ST. LOUIS METROP.	190
Kissel, John H	ST. LOUIS METROP.	190
Kissell, Richard W	GREENE	082
Kister, Geo E	ST CHARLES-LINCOLN	189
Kistler, W. David Jr.	ST. LOUIS METROP.	190
Kistner, Wm F	ST. LOUIS METROP.	190
Kitchen, Alice D	ST. LOUIS METROP.	190
Kitchen, Wm M	METRO MED	125
Kitchin, Winston H	ST. LOUIS METROP.	190
Kiyanclar, M. Emin	ST. LOUIS METROP.	190
Klachko, David M	BOONE	026
Klearman, Micki	ST. LOUIS METROP.	190
Klebba, Larry B	COLE	058
Klein, Bert H	ST. LOUIS METROP.	190
Klein, Edward H	METRO MED	125
Klein, Saul J	ST. LOUIS METROP.	190
Kleopfer, Lynn L	C-M-M-R	046
Kletzker, George R	ST. LOUIS METROP.	190
Koon, Benny H	D-H-P-D	066
Koontz, Paul G	METRO MED	125
Kopelson, Jeffrey C	ST. LOUIS METROP.	190
Kopen, Dan F	ST. LOUIS METROP.	190
Kopp, Kenneth R	METRO MED	125
Kopp, Shelby K	ST. LOUIS METROP.	190
Koppers, Lawrence E	METRO MED	125
Korenblat, Phillip E	ST. LOUIS METROP.	190
Korn, Robt L	ST. LOUIS METROP.	190
Kotner, Lawrence M Sr.	ST. LOUIS METROP.	190
Kotner, Lawrence M Jr.	ST. LOUIS METROP.	190
Kouchoukos, Nicholas T	ST. LOUIS METROP.	190
Kountz, Paul D Jr.	ST. LOUIS METROP.	190
Kouo, Louis	CAPE GIRARDEAU	042
Koury, William C	METRO MED	125
Kovac, S. Robert	ST. LOUIS METROP.	190
Kowert, Edward H	ST. LOUIS METROP.	190
Kraeger, Russell R	ST. LOUIS METROP.	190
Kraemer, Bruce A	ST. LOUIS METROP.	190
Kraetsch, Robert E	ST. LOUIS METROP.	190
Kraft, Jacob	METRO MED	125
Krahn, Henry C	GREENE	082
Krain, Samuel	ST. LOUIS METROP.	190
Kraner, Justin F	ST. LOUIS METROP.	190
Kranson, Seymour J	METRO MED	125
Krantman, Herbert J	ST. LOUIS METROP.	190
Kratz, Paul E	CAPE GIRARDEAU	042
Krautmann, John J	COLE	058
Kraybill, William G	ST. LOUIS METROP.	190
Krebs, Festus J III	METRO MED	125
Krechel, Susan W	BOONE	026
Kreisman, Jerold J	ST. LOUIS METROP.	190
Kreski, Kenneth C	ST. LOUIS METROP.	190
Kretchmar, Alan P	ST. LOUIS METROP.	190
Krettek, John E	ST. LOUIS METROP.	190
Kreusser, Katherine L	ST. LOUIS METROP.	190
Krewet, Frank A III	ST. LOUIS METROP.	190
Krieger, John L	ST. LOUIS METROP.	190
Kriegshauser, James W	ST. LOUIS METROP.	190
Kriegshauser, Lawrence A	ST. LOUIS METROP.	190
Krishna, Padma	METRO MED	125
Kroeger, Geo B Jr.	ST. LOUIS METROP.	190
Krojanker, David N	ST. LOUIS METROP.	190
Krojanker, Rolf J	ST. LOUIS METROP.	190
Kromer, Chas J	ST. LOUIS METROP.	190
Kronemer, Norton S	ST. LOUIS METROP.	190
Krummenacher, Thomas K	ST. LOUIS METROP.	190
Kruse, Carl R	NORTHEAST	150
Kuangparichat, Manoch	LAFAYETTE-RAY	118
Kuczer, Arnoldo	ST. LOUIS METROP.	190
Kuebel, Richard J	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Kuenzi, Donald E	CLAY-PLATTE	050
Kuhlengel, Barbara G	ST. LOUIS METROP.	190
Kuhlman, Ralph F	ST. LOUIS METROP.	190
Kuhlman, Robert E	ST. LOUIS METROP.	190
Kuhn, Lawrence F	ST. LOUIS METROP.	190
Kuhn, Wm F	METRO MED	125
Kulak, Gary	ST. LOUIS METROP.	
Kulkarni, Nandini S	ST. LOUIS METROP.	190
Kulkarni, Satish R	ST CHARLES-LINCOLN	189
Kumar, Ravi S	ST. LOUIS METROP.	190
Kumari, Vijaya	ST. LOUIS METROP.	190
Kunst, Edward J	ST. LOUIS METROP.	190
Kunz, Stephen R	METRO MED	125
Kuo, Gong T	DUNKLIN	070
Kurtz, Karl J	METRO MED	125
Kwan, Vicente W	ST. LOUIS METROP.	190
Kyaw, Myo M	ST. LOUIS METROP.	190
Kyger, John E	METRO MED	125

L

L'Ecuyer, Jerome L	ST. LOUIS METROP.	190
Laatsch, Robt H	B-W-R-C	034
Labayen, Ricardo A	METRO MED	125
Labrie, Paul L	METRO MED	125
LacKamp, Robert J	BUCHANAN	030
Ladd, Charles B	ST. LOUIS METROP.	190
Ladenson, Roland P	BOONE	026
Lai, Hsien-Ell	LAFAYETTE-RAY	118
Laiben, Gregg R	METRO MED	125
Laird, John M	ST. LOUIS METROP.	190
Lally, James J	METRO MED	125
Lam, Ernesto S	ST. LOUIS METROP.	190
Lamb, Eileen	ST CHARLES-LINCOLN	189
Lamb, Wanda	ST. LOUIS METROP.	190
Lamberti, Jos W	BOONE	026
Lamonda, Gary W	C-M-M-R	046
Lampert, Benjamin A	GREENE	082
Lamping, J. Daniels	ST. LOUIS METROP.	190
Lampros, William P	ST. LOUIS METROP.	190
Lampton, Lawrence M	BOONE	026
Lamy, John E	PETTIS	178
Landau, David W	ST. LOUIS METROP.	190
Landau, Wm M	ST. LOUIS METROP.	190
Lander, Robert C	ST. LOUIS METROP.	190
Landers, Burnell	METRO MED	125
*Landers, Gary A	CLAY-PLATTE	050
Landhuis, Leo R	BOONE	026
Landis, Geo K	METRO MED	125
Landreneau, Rodney J	BOONE	026
Landrum, Alice L	BOONE	026
Landry, J. Hubert	ST. LOUIS METROP.	190
Landsbaum, Charles J	COLE	058
Landsman, Ira S	METRO MED	125
Landy, Richard	ST. LOUIS METROP.	190
Lane, Clinton W	ST. LOUIS METROP.	190
Lane, Danl K	ST. LOUIS METROP.	190
Lang, John J	ST. LOUIS METROP.	190
Lange, David R	ST. LOUIS METROP.	190
Langley, Harriet S	METRO MED	125
Lanier, Earl W	ST. LOUIS METROP.	190
Laningham, Susan L	BUCHANAN	030
Lansche, W. Edward	ST. LOUIS METROP.	190
Lapi, Angelo	METRO MED	125
Lappas, Demetrios G	ST. LOUIS METROP.	190
Laramore, Rosemary	BOONE	026
Larocca, Felix E. F.	ST. LOUIS METROP.	190
Larsen, Wm E	METRO MED	125
Larson, Paul U	ST. LOUIS METROP.	190
Laster, Jerry L	BOONE	026
Latham, Raymond W	METRO MED	125
Latif, Azhar	LAFAYETTE-RAY	118
Latimer, Walter N	CLAY-PLATTE	050
Lattinville, Henry E	ST. LOUIS METROP.	190
Lauber, Jos J	ST. LOUIS METROP.	190
Lauderdale, William H	TRI-LAKES	208
Lauer, Danl J	METRO MED	125
Laughlin, Edward J	METRO MED	125
Laughlin, Thomas P	METRO MED	125
Lauter, Steven	ST. LOUIS METROP.	190
Laux, France A	ST. LOUIS METROP.	190
Lawrence, Geo H	ST. LOUIS METROP.	190
Lawrence, John R	SALINE	198
Lawton, John T	ST. LOUIS METROP.	190
Layle, John K Jr.	METRO MED	125
Layton, Ira C	METRO MED	125
LaBach, James P	METRO MED	125
LaDriere, Raymond J	ST. LOUIS METROP.	190
LaFerriere, Keith A	GREENE	082
LaFoe, William K	CAPE GIRARDEAU	042
LaHue, William C	LAFAYETTE-RAY	118
*LaPointe, Neal G	COLE	058
Leach, Wilfred	ST. LOUIS METROP.	190
Leary, Danl J	ST. LOUIS METROP.	190
Lederer, Charles M Jr.	METRO MED	125
Lederer, Chas M Sr	JOHNSON	110
Lednicky, Jay A	METRO MED	125
Lee, Charles K	METRO MED	125
Lee, David Y S	CAPE GIRARDEAU	042
Lee, Fransiska A	ST. LOUIS METROP.	190
Lee, Gerald B	WEST CENTRAL	214
Lee, H. T.	BOONE	026
Lee, Henry A	METRO MED	125
Lee, Joseph King Tak	ST. LOUIS METROP.	190
Lee, Jung H	JEFFERSON	106
Lee, King Y	METRO MED	125
Lee, Leander K	ST. LOUIS METROP.	190
Lee, Tae H	METRO MED	125
Lee, Wilfred	CAPE GIRARDEAU	042
Leech, Maurice P	BOONE	026
Leeper, Claude K	BOONE	026
Leeper, Sidlee W	BOONE	026
Leese, Philip T	METRO MED	125
Legarda, Maria M	METRO MED	125
Legler, Larry E	METRO MED	125
Lehman, Philip C	BUCHANAN	030
Lehman, Robert B	ST. LOUIS METROP.	190
Leibsohn, Joel M	METRO MED	125
Leidenfrost, Ronald D	ST. LOUIS METROP.	190
Leifer, Gary	METRO MED	125
Leifer, Wm W	METRO MED	125
Leiferman, James G	ST. LOUIS-RESIDENTS	195
Leightner, Wm F	ST. LOUIS METROP.	190
Leming, Bert H	ST. LOUIS METROP.	190
Lenobel, Milton I	ST. LOUIS METROP.	190
Lentz, Clark H	METRO MED	125
Lentz, Harold C	METRO MED	125
Lentz, Harold C	OZARKS	166
Lentz, Kathy J	F-G-W	074
Lenzenhuber, Karl J	F-G-W	074
Leonhardt, Erwin M	ST. LOUIS METROP.	190
Lepkowski, Hemlata K	BOONE	026
Lepkowski, Marek B	BOONE	026
Lepor, Herbert	ST. LOUIS METROP.	190
Lerner, Bruce	METRO MED	125
Lerner, Scott A	METRO MED	125
Leroux, Gene H	B-W-R-C	034
Lerwick, Everett R	ST. LOUIS METROP.	190
Leslie, James T	COLE	058
Leslie, Stephen A	CLAY-PLATTE	050
Letizia, Wayne L	METRO MED	125
Levanvo, William	JASPER	102
Levelle, Jonathan P	METRO MED	125
Levenson, Ernest	B-W-R-C	034
Levenson, Ina	B-W-R-C	034
Levey, Harry B	METRO MED	125
Levi, Bernard	METRO MED	125
Levie, Benton B	SEMO	202
Levin, Marvin E	ST. LOUIS METROP.	190
Levine, Laurence A	ST. LOUIS METROP.	190
Levine, Myron A	LAFAYETTE-RAY	118
Levine, Richard S	ST. LOUIS METROP.	190
Levitt, Joseph	ST. LOUIS METROP.	190
Levitt, Robert G	ST. LOUIS METROP.	190
Levy, Jerome F	ST. LOUIS METROP.	190
Levy, Morton A	ST. LOUIS METROP.	190
Lewin, W. Howard	ST. LOUIS METROP.	190
Lewis, Frank H	METRO MED	125
Lewis, J. Eugene	ST. LOUIS METROP.	190
Lewis, Lawrence M	ST. LOUIS METROP.	190
Lewis, Noel R	GREENE	082
Lewis, Revis C	METRO MED	125
Lewis, Robert D	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

LeBlanc, Leo J	ST. LOUIS METROP.	190
LeFevre, Philip J	GREENE	082
Liang, Jing C	METRO MED	125
Liao, Kun T	ST. LOUIS METROP.	190
Lichtor, Jos M	METRO MED	125
Lichty, Chas A	NORTHEAST	150
Lieb, Francis X	ST. LOUIS METROP.	190
Lieberman, David M	ST. LOUIS METROP.	190
Liebhaber, Harvey	ST. LOUIS METROP.	190
Lila, Aram	CLAY-PLATTE	050
Liliedahl, Roger L	METRO MED	125
*Lillig, James F	CLAY-PLATTE	050
Lilly, Douglas R	ST. LOUIS METROP.	190
Lim, Il T	ST. LOUIS METROP.	190
Lim, Piemsak	ST. LOUIS METROP.	190
Lima, Jose A	ST. LOUIS METROP.	190
Limpiphiphatn, Dhajphong	PERRY-STE GENEVIEVE	174
Limpiphiphatn, Ester P	PERRY-STE GENEVIEVE	174
Lin, C H	C-M-M-R	046
Lin, Chi-Hsi	GREENE	082
Lin, H T	C-M-M-R	046
Lin, Hsiu-San	ST. LOUIS METROP.	190
Linde, John W	MID-MISSOURI	135
Lindgren, Carleton J	METRO MED	125
Link, Alexander J	ST. LOUIS METROP.	190
Link, Vance E	METRO MED	125
Linn, Richard M	ST. LOUIS METROP.	190
Linsenmeyer, Charles M	ST CHARLES-LINCOLN	189
Lintecum, Frederick B	METRO MED	125
Linville, Howard E	METRO MED	125
Lipschitz, Ervin	ST. LOUIS METROP.	190
Lipsitz, Ellis S	ST. LOUIS METROP.	190
Lischwe, Daniel H	ST. LOUIS METROP.	190
Lischwe, Timothy D	LAKE OF THE OZARKS	120
Lising, Alexander A	BOONE	026
Liss, Jay L	ST. LOUIS METROP.	190
Littlejohn, Robert T	CLAY-PLATTE	050
Litton, Lyle D	GREENE	082
Litton, Lynn O	BOONE	026
Litwiller, Raymond.W	BOONE	026
Litzow, Peter L	ST. LOUIS METROP.	190
Liu, Ben C	METRO MED	125
Livingston, Don G	ST. LOUIS METROP.	190
Llorens, Alfred S	BOONE	026
Lockard, Orlyn O	BUCHANAN	030
Lockhart, Charles E	GREENE	082
Lockwood, Gary F	METRO MED	125
Lockwood, Ted E	METRO MED	125
Loeb, Richard H	GREENE	082
Loeb, Virgil	ST. LOUIS METROP.	190
Loeffel, Ellen S	ST. LOUIS METROP.	190
Loeppky, Carol B	BOONE	026
Loesch, J. John	JASPER	102
Lofgreen, Craig S	METRO MED	125
Loftus, Loretta S	METRO MED	125
Logan, Samuel E	ST. LOUIS METROP.	190
Logan-Morrison, Beverly A	ST. LOUIS METROP.	190
Loggan, Michael B	CLAY-PLATTE	050
Logie, Macdonald B	ST. LOUIS METROP.	190
*Logston, David G	GREENE	082
Logue, John T	BOONE	026
Lohmar, Roland E	BOONE	026
Lohr, Robt W	ST. LOUIS METROP.	190
Lohrentz, Lois H	METRO MED	125
Loitman, Bernard S	ST. LOUIS METROP.	190
Lombardo, Joseph A	ST. LOUIS METROP.	190
Lombardo, Richard J	GREENE	082
Londe, Alan M	ST. LOUIS METROP.	190
Londe, Sol	ST. LOUIS METROP.	190
London, Stanley L	ST. LOUIS METROP.	190
Lonergan, Warren M	ST. LOUIS METROP.	190
*Long, Chester I	JASPER	102
Long, Curtis W	WEST CENTRAL	214
Long, Frank B	ST. LOUIS METROP.	190
Long, John W	BOONE	026
Long, R S	METRO MED	125
Long, Stephen E	GREENE	082
Long, Timothy P	F-G-W	074
Lonsway, Maurice J Jr.	ST. LOUIS METROP.	190
Lopez, Marvin J	ST. LOUIS METROP.	190
Lopez, Ruben E	PEMISCOT	170
Lopez-Plata, Roberto	METRO MED	125
Lord, Richard E	ST. LOUIS METROP.	190
Loren, Michael L	METRO MED	125
Lorenc, Ernest	GREENE	082
Lorenzo, Edilberto B	METRO MED	125
Lottes, J. Otto	ST. LOUIS METROP.	190
Lotuaco, Gamaliel G	METRO MED	125
Loughead, John R	B-W-R-C	034
Loutzenhiser, James K	METRO MED	125
Love, Gerry A	METRO MED	125
Lovinger, Warren C Jr.	WEST CENTRAL	214
Lovinggood, Thos A	CAPE GIRARDEAU	042
Lowe, Alvin L	PETTIS	178
Lowe, H. Arch Jr	GREENE	082
Lowenstein, Paul S	ST. LOUIS METROP.	190
Loyd, Earl L	COLE	058
Loynd, Robt C	ST. LOUIS METROP.	190
LoPiccolo, Vincent J Jr.	ST. LOUIS METROP.	190
Lubowitz, Herbert	ST. LOUIS METROP.	190
Lucas, Thomas G	ST. LOUIS METROP.	190
Luckenbill, Paul T	CLINTON	054
Ludwig, Lee V	WEST CENTRAL	214
Ludwig, Mark A	ST. LOUIS METROP.	190
Ludwig, William D	GREENE	082
Luechtefeld, Frank	ST. LOUIS METROP.	190
Lueckenhoff, Rebecca R	COLE	058
Luerding, Jeffrey A	CLAY-PLATTE	050
Luetje, Charles M	METRO MED	125
Lugo, Saml	ST. LOUIS METROP.	190
Luh, Andrew M	ST. LOUIS METROP.	190
Luke, Robert A	ST. LOUIS METROP.	190
Lund, Herluf G	ST. LOUIS METROP.	190
Lund, Robert H Jr.	ST. LOUIS METROP.	190
Lundgren, Craig H	ST. LOUIS-RESIDENTS	195
Lundman, Hugh	GREENE	082
Lurie, Harold H	GREENE	082
Lusk, Chas A	WEST CENTRAL	214
Luther, George A	ST. LOUIS METROP.	190
Lutkewitte, Jos F	PERRY-STE GENEVIEVE	174
Luzecky, Michael H	GREENE	082
Lyddon, Harold R Jr.	METRO MED	125
Lyle, Robt R	LAKE OF THE OZARKS	120
Lyles, Thomas O	ST. LOUIS METROP.	190
Lyman, Edward H	ST. LOUIS METROP.	190
Lynch, Gerald C	METRO MED	125
Lynch, Thos W	GREENE	082
Lynxwiler, Chester P	ST. LOUIS METROP.	190
Lyons, Daniel F	GREENE	082
Lyskowski, John C	COLE	058
Lyskowski, Maria M	CAPE GIRARDEAU	042
Lyss, Carl A	ST. LOUIS METROP.	190
Lyss, Stanley B	ST. LOUIS METROP.	190
Lytle, Edwin L	ST. LOUIS METROP.	190
Lytle, Michael F	METRO MED	125

M

Maas, Corey S	ST. LOUIS METROP.	190
Maben, Sam E	METRO MED	125
Macdonnell, Thos M	WEBSTER	210
Machefsky, Sidney D	ST. LOUIS METROP.	190
Machek, Otakar	ST. LOUIS METROP.	190
Mackey, Richard L	ST. LOUIS METROP.	190
Maclaughlin, James C	JASPER	102
Macleod, Angus	ST. LOUIS METROP.	190
Macnish, James M	ST. LOUIS METROP.	190
MacDonald, Robin R	METRO MED	125
MacDonald, Robt R Jr.	ST. LOUIS METROP.	190
MacDonald, Wm C	ST. LOUIS METROP.	190
MacGee, Edwin E	METRO MED	125
MacInnis, Florence E	METRO MED	125
MacNaughton, Ralph E	METRO MED	125
MacNaughton, Robert A	METRO MED	125
MacNaughton, Robert A II	CLAY-PLATTE	050
Maddipati, Sreedezi	ST. LOUIS METROP.	190
Madduri, Aruna D	B-W-R-C	034
Madduri, Sivaprasad D	B-W-R-C	034
Madrid, Dominador O	ST. LOUIS METROP.	190
Magaw, David C	D-H-P-D	066
Magee, Robt L	WEST CENTRAL	214
Magee, W. Edwin	ST. LOUIS METROP.	190
*Magill, William S	GREENE	082
Magruder, Lyell M	WEST CENTRAL	214
Mahboubi, Aziz O	SEMO	202
Mahe, Geo A	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Maher, Robt W	GREENE	082
Mahmoud, Said F	METRO MED	125
Mainini, Stephen E	ST. LOUIS METROP.	190
Mais, Thomas E	METRO MED	125
Maitz, Carlos A	ST. LOUIS METROP.	190
Major, Troy E	GREENE	082
Majors, Patrick F	ST. LOUIS METROP.	190
Majure-Lees, Joyce E	METRO MED	125
Majzoub, Hish S	JASPER	102
Makos, Mignon M	BUCHANAN	030
Malik, Sarfraz A	ST. LOUIS METROP.	190
Maliszewski, James A	METRO MED	125
Mallouk, Alexander G	METRO MED	125
Mallow, James E	METRO MED	125
Malmberg, Virgil L	ST. LOUIS METROP.	190
Maloney, Robt M	ST. LOUIS METROP.	190
Manansala, Antonio Q	ST. LOUIS METROP.	190
Mandler, George	GRAND RIVER	078
Mangalat, Narayanan K	JASPER	102
Mangum, William B	METRO MED	125
Mangunta, Vijaya K	CAPE GIRARDEAU	042
Manion, Maria E	ST. LOUIS METROP.	190
Manion, Thos S	METRO MED	125
Manire, John E	JASPER	102
Mann, James K	NORTHEAST	150
Mann, Kenneth R	CLAY-PLATTE	050
Mannis, Charles I	ST. LOUIS METROP.	190
Manske, Paul R	ST. LOUIS METROP.	190
Mantell, Jack M	GREENE	082
Mantese, Vito A	ST. LOUIS METROP.	190
Mantovani, John F	ST. LOUIS METROP.	190
Manuel, Louis C	METRO MED	125
Maple, Francis M	GREENE	082
Maranan, Diosdado L	JEFFERSON	106
Maravilla, Levy M	ST. LOUIS METROP.	190
Marbarger, John P Jr.	ST. LOUIS METROP.	190
Marchiando, Albert W	F-G-W	074
Marchosky, J. Alex	ST. LOUIS METROP.	190
Marcum, John D	F-G-W	074
Marcus, Morris D	ST. LOUIS METROP.	190
Mardiney, Michael III	ST. LOUIS-RESIDENTS	195
Mardini, Edward E	MINERAL AREA	138
Margolis, David M	ST. LOUIS METROP.	190
Margolis, Robert P	ST. LOUIS METROP.	190
Marietta, William G	CAPE GIRARDEAU	042
Markway, Gregory A	METRO MED	125
Marr, Garrett L	METRO MED	125
Marre, Joyce E	ST. LOUIS METROP.	190
Marrs, David B	ST CHARLES-LINCOLN	189
Marsh, Alice	METRO MED	125
Marsh, Jeffrey L	ST. LOUIS METROP.	190
Marshall, Hal E	METRO MED	125
Marshall, Jay P II	ST. LOUIS METROP.	190
Marshall, William H	COLE	058
Marshall, William G Jr.	ST. LOUIS METROP.	190
Marston, F. James	BUCHANAN	030
Marti, Larry B	MID-MISSOURI	135
Martin, Clarence A	JASPER	102
Martin, Danl J	ST. LOUIS METROP.	190
Martin, David S	ST. LOUIS METROP.	190
Martin, Jeffrey W	ST. LOUIS METROP.	190
Martin, John N	BUCHANAN	030
Martin, Mark W	METRO MED	125
Martin, Richard A	CAPE GIRARDEAU	042
Martin, Richard W	BOONE	026
Martin, Scott A	ST. LOUIS METROP.	190
Martin, Wendell J	PIKE	186
Marty, David R	COLE	058
Martz, John C	ST. LOUIS METROP.	190
Marushack, Michael M	ST. LOUIS METROP.	190
Maslan, Mark J	METRO MED	125
Mass, Joan H	ST. LOUIS METROP.	190
Massie, Edward	ST. LOUIS METROP.	190
Masters, Edwin J	CAPE GIRARDEAU	042
Masters, Wm H	ST. LOUIS METROP.	190
Masucci, Jos M	METRO MED	125
Mathew, Ruby	ST. LOUIS METROP.	190
Matias, Delia A	BOONE	026
Matile, Gerald U	METRO MED	125
Matovich, Violet B	METRO MED	125
Matson, Jeffrey A	METRO MED	125
Matsuba, Howard M	ST. LOUIS METROP.	190
Matta, Camille S	METRO MED	125
Mattax, James B Jr.	GREENE	082
Matthews, John G	ST. LOUIS METROP.	190
Matthews, John I	COLE	058
Matthews, Richard H	MID-MISSOURI	135
Matthews, Thomas D	F-G-W	074
Maughs, Sydney B	ST. LOUIS METROP.	190
Maupin, Kathy C	ST. LOUIS METROP.	190
Maves, Michael D	ST. LOUIS METROP.	190
Maxson, Katherine A	ST. LOUIS METROP.	190
Maxson, Theodore R	JOHNSON	110
Maxwell, Sarz	BUCHANAN	030
May, Albert L	B-W-R-C	034
Mayer, John H Jr.	METRO MED	125
Mayer, Robt A	ST. LOUIS METROP.	190
Mayes, Ben R	ST. LOUIS METROP.	190
Maylack, Fallon H	ST. LOUIS METROP.	190
Mayuga, Edgardo G	ST. LOUIS METROP.	190
Mayuga, Laureano G	SOUTH CENTRAL	206
Mayus, Joseph L	GREENE	082
McAdam, C. Rush	ST. LOUIS METROP.	190
McAfee, Gordon	GREENE	082
McAlhany, Howard J	GREENE	082
McAlister, Wm H	ST. LOUIS METROP.	190
McBride, Lawrence R	ST. LOUIS METROP.	190
McCabe, Eugene J	ST CHARLES-LINCOLN	189
McCadden, Michael E	ST. LOUIS METROP.	190
McCaffree, Mary K	COLE	058
McCall, Edwin L	ST. LOUIS METROP.	190
McCalla, John P	CLAY-PLATTE	050
McCallister, Ben D	METRO MED	125
McCanse, Andrew	METRO MED	125
McCanse, Lynn R	CLAY-PLATTE	050
McCarthy, Christopher	ST. LOUIS METROP.	190
McClennan, Bruce L	ST. LOUIS METROP.	190
McCluggage, Newton C	CLAY-PLATTE	050
McCollister, David L	ST CHARLES-LINCOLN	189
McConahay, David R	METRO MED	125
McConchie, James E	METRO MED	125
McCool, James F	ST. LOUIS METROP.	190
McCorcle, Marcus D	GREENE	082
McCord, E. Scott	BOONE	026
McCormack, Robert E	METRO MED	125
McCormick, James E	CLAY-PLATTE	050
McCown, Allan H	ST. LOUIS METROP.	190
McCoy, Frederick J	METRO MED	125
McCoy, Warren R	PEMISCOT	170
McCraw, Doyle C	D-H-P-D	066
McCray, Glen M	GREENE	082
McCray, Stephen A	CLAY-PLATTE	050
McCroskey, Lon C	METRO MED	125
McCulloch, Scott W	METRO MED-RESIDENTS	126
McCullough, Nancy J	MID-MISSOURI	135
McDaniel, John R	BUCHANAN	030
McDavid, Robert E	BOONE	026
McDermott, Alfred E	PERRY-STE GENEVIEVE	174
McDonald, Eugene F	CAPE GIRARDEAU	042
McDonald, Herbert L	METRO MED	125
McDonald, Margaret E	JASPER	102
McDonald, Michael G	JASPER	102
McDonald, Wallace	BUCHANAN	030
McDonald, Wilbur P	BUCHANAN	030
McDonnell, John F	METRO MED	125
McElroy, Glenn L	BOONE	026
McFadden, Gene A	LAFAYETTE-RAY	118
McFarland, H. R.	METRO MED	125
McFarland, Rodney J	OZARKS	166
McGath, Rickey L	B-W-R-C	034
McGinnis, Wm F	ST. LOUIS METROP.	190
McGinty, Chas P	CAPE GIRARDEAU	042
McGinty, Frank H	CAPE GIRARDEAU	042
McGonigle, James P	JASPER	102
McGonigle, Michael M	JASPER	102
McGovney, Janice K	CLAY-PLATTE	050
McGraw, Daniel J	ST. LOUIS METROP.	190
McGraw, John J	SEMO	202
McGuire, Daniel J	ST. LOUIS METROP.	190
McGuire, Thomas H	METRO MED	125
McGurk, Thomas E	METRO MED	125
McHardy, Bryson R Jr.	NORTHEAST	150
McIntire, Timothy L	COLE	058
McIntosh, Donald E	METRO MED	125
McIntosh, Douglas A	CAPE GIRARDEAU	042
McIntosh, Michele C	METRO MED	125

---

*Doctor of osteopathy.

McIntyre, John D	METRO MED	125
McKee, Wallace P	METRO MED	125
McKeel, Thos B	METRO MED	125
McKinley, Lois J	METRO MED	125
McKinney, Daniel C	GREENE	082
McKinney, Joe K	ST. LOUIS METROP.	190
McKinney, John W	ST. LOUIS METROP.	190
McKinney, William D Jr.	MINERAL AREA	138
McKinsey, David S	METRO MED	125
McKnelly, Wm V	METRO MED	125
McKnight, Scott J	CLAY-PLATTE	050
McLaren, A. Lesley	ST. LOUIS METROP.	190
*McLaughlin, Dan A	BUCHANAN	030
McLaughlin, Durnell	METRO MED	125
McLaughlin, Richard D	GREENE	082
McLean, Terry E	METRO MED	125
McLear, Patrick W	ST. LOUIS METROP.	190
McLemore, Willie O	METRO MED	125
McLeod, Alan J	METRO MED	125
McMeekin, Sheila P	METRO MED	125
McMillan, David L	OZARKS	166
McMillen, James J	BUCHANAN	030
McMullin, Forbes A	ST. LOUIS METROP.	190
McMurray, Earlene H	METRO MED	125
McMurray, Scott W	GREENE	082
McMurray, Timothy I	METRO MED	125
McNalley, Michael	ST. LOUIS METROP.	190
McNamara, Gerald R	CLAY-PLATTE	050
McNamara, John J	ST. LOUIS METROP.	190
McNeal, Douglas M	GREENE	082
McNitt, Jay D	METRO MED	125
McPhee, Mark S	METRO MED	125
McPhee, Wm R	CLAY-PLATTE	050
McQueary, Frederick G	GREENE	082
McVey, Pamela S	METRO MED	125
Meador, James R	ST. LOUIS METROP.	190
Meadows, C. Douglas	ST. LOUIS METROP.	190
*Mears, Gregory H	BUCHANAN	030
Mechlin, David C	BOONE	026
Mechlin, Norman J	GREENE	082
Medler, John F	ST. LOUIS METROP.	190
Medler, P. Louis	ST. LOUIS METROP.	190
Medley, Benjamin E	METRO MED	125
Medlicott, William J	METRO MED	125
Meegan, Robt J	METRO MED	125
Mehaffy, Orville A	JASPER	102
Mehan, Donald J	ST. LOUIS METROP.	190
Mehlhorn, Gary L	GREENE	082
Mehra, Ravi	ST. LOUIS METROP.	190
Mehra, Usha	ST. LOUIS METROP.	190
Meier, Francis X	COLE	058
Meiklejohn, Duncan C	METRO MED	125
Meinberg, William H	ST. LOUIS METROP.	190
Meiners, David J	ST. LOUIS METROP.	190
Meiners, Paul N	ST. LOUIS METROP.	190
Meiners, Theodore M	ST. LOUIS METROP.	190
Meldi, Dominic M	GREENE	082
Melgaard, Sven R	METRO MED	125
Melia, B J Jr.	METRO MED	125
Mell, Roger L	ST. LOUIS METROP.	190
*Mellies, Steven D	CAPE GIRARDEAU	042
Melson, G. Leland	ST. LOUIS METROP.	190
Meltz, Gary J	ST CHARLES-LINCOLN	189
Memken, John A	NORTHEAST	150
Menchetti, Donald E	GREENE	082
Mendelsohn, George E	ST. LOUIS METROP.	190
Mendelsohn, Robt S	ST. LOUIS METROP.	190
Mendelson, David F	ST. LOUIS METROP.	190
Mendez, Maria A	GREENE	082
Mendonsa, Lawrence E	ST. LOUIS METROP.	190
Menendez, Silvana Y	ST CHARLES-LINCOLN	189
Mengel, Charles E	C-M-M-R	046
Menne, Marvin C	MINERAL AREA	138
Mentel, John J	ST CHARLES-LINCOLN	189
Mentgen, Carl N	GREENE	082
Meredith, William R	JASPER	102
Merenda, Frank J	ST. LOUIS METROP.	190
Merenda, James T	ST. LOUIS METROP.	190
Merenda, Sam J	ST. LOUIS METROP.	190
Merrims, Theodore	ST. LOUIS METROP.	190
Merritt, Burch A	ST. LOUIS METROP.	190
Mertz, Janet S	METRO MED	125
Mested, Peter H	METRO MED	125
Mestres, Hugh M	ST. LOUIS METROP.	190
Metzler, Michael H	BOONE	026
Meyer, Harry E	ST. LOUIS METROP.	190
Meyer, Jay	ST. LOUIS METROP.	190
Meyer, Jerry L	LAFAYETTE-RAY	118
Meyer, John S	ST. LOUIS METROP.	190
Meyer, John W	GREENE	082
Meyer, Melvin E	ST. LOUIS METROP.	190
Meyer, Paul W	METRO MED	125
Meyer, Randall E	COLE	058
Meyer, Robert C	ST. LOUIS METROP.	190
Meyer, Wayne W	ST. LOUIS METROP.	190
Meyerrose, Gary E	ST. LOUIS METROP.	190
Meyers, Elsie F	ST. LOUIS METROP.	190
Meyers, Jerry R	ST CHARLES-LINCOLN	189
Meyers, John B	ST. LOUIS METROP.	190
Meyers, Robt W	ST. LOUIS METROP.	190
*Michael, Roy A	COLE	058
Michael, Vernon E	ST. LOUIS METROP.	190
Michaelree, John F	ST. LOUIS METROP.	190
Michaels, Robert H	GREENE	082
Michelson, Richard B	METRO MED	125
Middleton, Jerry N	ST. LOUIS METROP.	190
Middleton, John W	PIKE	186
Middleton, Mary A	ST. LOUIS METROP.	190
Mihalevich, John A Jr	GREENE	082
Milder, Barry D	ST. LOUIS METROP.	190
Milder, Benj	ST. LOUIS METROP.	190
Miles, Geo O	METRO MED	125
Miles, Paul W	ST. LOUIS METROP.	190
Miles, Wayne B	GREENE	082
Milgram, Byron A	METRO MED	125
Mill, Wm B JR	ST. LOUIS METROP.	190
Millangue, Consolacion	ST. LOUIS METROP.	190
Miller, Burney A	LAFAYETTE-RAY	118
Miller, Charles W	ST. LOUIS METROP.	190
Miller, Chas Jr.	ST. LOUIS METROP.	190
Miller, D H	C-M-M-R	046
Miller, Donald	COLE	058
Miller, Edward J	ST. LOUIS METROP.	190
Miller, Gayle P	METRO MED	125
Miller, Geoffrey W	ST. LOUIS METROP.	190
Miller, Gerald L Jr.	METRO MED	125
Miller, Harry G	HENRY	086
Miller, James E	ST. LOUIS METROP.	190
Miller, John T	METRO MED	125
Miller, Jule P	ST. LOUIS METROP.	190
Miller, Leroy J	BOONE	026
Miller, Michael R	METRO MED	125
Miller, Paul E	ST. LOUIS METROP.	190
Miller, Robt N	ST. LOUIS METROP.	190
Miller, William D	SEMO	202
Miller, William D	BUCHANAN	030
Miller, Wilson H	METRO MED	125
Miller, Wm V	ST. LOUIS METROP.	190
Millet, Ruth E	METRO MED	125
Millwee, Elizabeth M	BOONE	026
Milne, Jay L	GREENE	082
Milstead, Kenneth L Jr.	ST. LOUIS METROP.	190
Milster, Clyde R	ST. LOUIS METROP.	190
Miltenberger, Paul C	DUNKLIN	070
Minana, Mitchell F	ST. LOUIS METROP.	190
Minkoff, I. Monica	ST CHARLES-LINCOLN	189
Minnigerode, Lana K	METRO MED	125
Minnigerode, Turner L	METRO MED	125
Mir, A. Rauf	METRO MED	125
Mirbaha, Mitchell M	ST. LOUIS METROP.	190
Mirowitz, Scott A	ST. LOUIS METROP.	190
Mischnick, Carol R	ST. LOUIS METROP.	190
Mishkin, Marvin R	ST. LOUIS METROP.	190
Miskovsky, Emil F	ST. LOUIS METROP.	190
Missey, Wilburn C	ST. LOUIS METROP.	190
Mistry, Tehmton S	ST. LOUIS METROP.	190
Mitchell, Andrew D	METRO MED	125
Mitchell, Franklin L	BOONE	026
Mitchell, John D	METRO MED	125
Mitchell, Lynn D	BOONE	026
Mitchell, Mark A	METRO MED	125
Mitchell, Nevada A	METRO MED	125
Mitchell, Robt H	METRO MED	125
Mitchell, Thos J	F-G-W	074
Mitra, Nirmal K	METRO MED	125
Mittleman, Frederick S	METRO MED	125

---

*Doctor of osteopathy.

Mizell, Myron W	GREENE	082
Modin, Jeffrey J	ST. LOUIS METROP.	190
Moeller, F. Delbert	ST CHARLES-LINCOLN	189
Moeller, Randall J	BUCHANAN	030
Mohapatra, Raj N	ST CHARLES-LINCOLN	189
Mohrman, Raymond F	ST. LOUIS METROP.	190
Mohs, Frank R	ST. LOUIS METROP.	190
Mohsen, Aly M	GREENE	082
Molberg, Peter J	GREENE	082
Molchan, James L	D-H-P-D	066
Molden, C. Scott	ST. LOUIS METROP.	190
Molden, Chas A	ST. LOUIS METROP.	190
Molina, Roy	BOONE	026
Mollman, H. Dennis	ST. LOUIS METROP.	190
Monafo, Wm W	ST. LOUIS METROP.	190
Monaghan, Greg G	BOONE	026
Mongan, James J	METRO MED	125
Monroe, Alicia D	METRO MED	125
Monroe, C. Dean	BOONE	026
Montani, Chas	ST. LOUIS METROP.	190
Monteleone, James A	ST. LOUIS METROP.	190
Monteleone, Patricia L	ST. LOUIS METROP.	190
Montello, Samuel A	METRO MED	125
Monterubio, Fred R Jr.	ST. LOUIS METROP.	190
Montes, Arturo C	ST. LOUIS METROP.	190
Montes De Oca, Julio	ST. LOUIS METROP.	190
Montgomery, Austin F	ST. LOUIS METROP.	190
Montgomery, John H III	JASPER	102
Montgomery, Michael A	METRO MED	125
Moolsintong, Pornchai	ST. LOUIS METROP.	190
Mooney-Smith, Patricia	METRO MED	125
Moore, Candice A	WEST CENTRAL	214
Moore, David L	METRO MED	125
Moore, De Armond	GREENE	082
Moore, Harry G Jr.	ST. LOUIS METROP.	190
Moore, Jack D	METRO MED	125
Moore, Joan Prouty	METRO MED	125
Moore, John M	METRO MED	125
Moore, Michael T	WEST CENTRAL	214
Moore, Michael R	SOUTH CENTRAL	206
Moore, Richard E	CAPE GIRARDEAU	042
Moore, Thomas B	JASPER	102
Moore, Walter L	ST. LOUIS METROP.	190
Mora, Alvaro	ST. LOUIS METROP.	190
Moran, Christopher J	ST. LOUIS METROP.	190
Moran, Thos M	ST. LOUIS METROP.	190
Morantz, Robert A	METRO MED	125
Moranville, Benedict A	BUCHANAN	030
Moranz, John W	B-W-R-C	034
Morehead, Wm E	DUNKLIN	070
Morehouse, Paul D	F-G-W	074
Morest, F S	METRO MED	125
Morey, Kirk P	ST. LOUIS METROP.	190
Morgan, Charles H	GREENE	082
Morgan, David B	METRO MED	125
Morgan, Dix R	CAPE GIRARDEAU	042
Morgan, Harry C	ST. LOUIS METROP.	190
Morgan, John L	GREENE	082
Morgan, Stephan S	ST. LOUIS METROP.	190
Morgan, W. Tom Jr.	BOONE	026
Morgan, Willy J C	ST. LOUIS METROP.	190
Moriconi, William J	ST. LOUIS METROP.	190
Moritz, Gerald	ST. LOUIS METROP.	190
Morley, Mary A	ST. LOUIS METROP.	190
*Morley, Ronald F	COLE	058
Morris, Alan H	ST. LOUIS METROP.	190
Morris, Barbara A	METRO MED	125
Morris, J H	METRO MED	125
Morris, John J	BOONE	026
Morris, R. William	ST. LOUIS METROP.	190
Morris, Terry V	METRO MED	125
Morrison, Arlen E	ST. LOUIS METROP.	190
Morrison, Donald H	METRO MED	125
Morrison, Howard	ST. LOUIS-RESIDENTS	195
Morrison, Richard A	METRO MED	125
Morrison, Thos A	OZARKS	166
Morrison, Tom V	TRI-LAKES	208
Morrow, N. Eugene	GREENE	082
Mortensen, Frede	ST. LOUIS METROP.	190
Morton, David J	ST. LOUIS METROP.	190
Morton, Paul C	GREENE	082
Morton, Wayne L	WEST CENTRAL	214
Mosbacher, Hugh E	METRO MED	125
Mosby, Larry D	BOONE	026
Moseley, F. Thomas	GREENE	082
Moses, Robert A	ST. LOUIS METROP.	190
Mosley, Julian C	ST. LOUIS METROP.	190
Moss, Paul	METRO MED	125
Motchan, Dennis G	ST. LOUIS METROP.	190
Mothershead, John L	BUCHANAN	030
Motier, Thomas H	ST. LOUIS METROP.	190
Mowrey, Wm O	ST. LOUIS METROP.	190
Moya, Carlos E	BUCHANAN	030
Muckerman, Richard I	ST. LOUIS METROP.	190
Muckerman, Richard C II	ST. LOUIS METROP.	190
Muegge, F. David	GREENE	082
Muelleman, Peter J	METRO MED	125
Mueller, Adolph R	JASPER	102
Mueller, Clarence E	ST. LOUIS METROP.	190
Mueller, Howard A	ST. LOUIS METROP.	190
Mueller, John J	ST. LOUIS METROP.	190
Mueller, Jos A	ST. LOUIS METROP.	190
Mueller, Mark R	OZARKS	166
Mueller, Martin J	METRO MED	125
Mueller, Morris A	ST. LOUIS METROP.	190
Mueller, Robt J	ST. LOUIS METROP.	190
Mueller, Wilbur K	ST. LOUIS METROP.	190
Muhammud, Faquir	ST. LOUIS METROP.	190
Muhm, Harvard Y	ST CHARLES-LINCOLN	189
Mulder, George D	BUCHANAN	030
Mullarky, Wilbur A	ST. LOUIS METROP.	190
Mullen, Jack	MINERAL AREA	138
Mullen, Mary E	AUDRAIN	014
Muller, Milton	METRO MED	125
Mullican, Chas N	BUCHANAN	030
Mulligan, Michael E	ST. LOUIS METROP.	190
Mullins, Bernard L	CLAY-PLATTE	050
Mullins, John E	ST. LOUIS METROP.	190
Mundy, William L	METRO MED	125
Munger, Michael L	METRO MED	125
Munyan, Earl A	METRO MED	125
Muraywid, Ahmad H	AUDRAIN	014
Murdock, Nathaniel	ST. LOUIS METROP.	190
Murphy, Daniel J	ST. LOUIS METROP.	190
Murphy, Everett M III	METRO MED	125
Murphy, J. Peter Jr.	ST. LOUIS METROP.	190
Murphy, James A	BUCHANAN	030
Murphy, John P	METRO MED	125
Murphy, Wm A Jr.	ST. LOUIS METROP.	190
Murrell, H. Jerry	BOONE	026
Muscato, Joseph J	BOONE	026
Muscato, Mary S	BOONE	026
Muschany, Norman K	ST. LOUIS METROP.	190
Mustoe, Thomas A	ST. LOUIS METROP.	190
Mutchnick, Norman	METRO MED	125
Muzaffaruddin, Mohammed	ST CHARLES-LINCOLN	189
Myers, Carl M	METRO MED	125
Myers, David W	CLAY-PLATTE	050
Myers, Gary H	ST. LOUIS METROP.	190
Myers, Geo H	METRO MED	125
Myers, Ivan T	ST. LOUIS METROP.	190
Myers, James M	MID-MISSOURI	135
Myers, John S	METRO MED	125
Myron, Mark C	METRO MED	125

N

Nadinola, Chennaiah C	AUDRAIN	014
Nagle, Michael G	JASPER	102
Nagy, Al L	B-W-R-C	034
Nahm, Chung C	ST. LOUIS METROP.	190
Naime, Mansour J	METRO MED	125
Nakra, Bharat Raj	ST. LOUIS METROP.	190
Nakra, Rashmi R	ST. LOUIS METROP.	190
Namnum, Peter A	METRO MED	125
Nanson, James D	BOONE	026
Narayan, Dilip L	ST. LOUIS METROP.	190
Narkiewicz, Lawrence S	ST. LOUIS METROP.	190
Naseer, Riaz A	ST. LOUIS METROP.	190
Nash, Helen E	ST. LOUIS METROP.	190
Nash, Homer E Jr.	ST. LOUIS METROP.	190
Nashelsky, Marcus B	BOONE-RESIDENT SEC.	027
Naumovich, Anna D	ST. LOUIS METROP.	190
Naunheim, Keith S	ST. LOUIS METROP.	190
Navato, Jose R	METRO MED	125
Near, David M	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Neblett, Lewis M	GREENE	082
Negrete, Abelardo	CLAY-PLATTE	050
Neighbor, Ernest H	METRO MED	125
Neihart, Robert E	METRO MED	125
Nelson, Bentley A	METRO MED	125
Nelson, David E	GREENE	082
Nelson, Donald C	GREENE	082
Nelson, J. Roger	ST. LOUIS METROP.	190
Nelson, Paul W	METRO MED	125
Nelson, Richard E	METRO MED	125
Nelson, Susan J	ST. LOUIS METROP.	190
Nemec, Edward S	ST. LOUIS METROP.	190
Nepute, James A	ST. LOUIS METROP.	190
Nesselrode, John H	METRO MED	125
Neu, Leo T III	GREENE	082
Neu, Leo T Jr	GREENE	082
Neuman, Neal	ST. LOUIS METROP.	190
Newland-Pagan, Yvonne C	DUNKLIN	070
Newman, Mary J	OZARKS	166
Newman, Matthew	ST. LOUIS METROP.	190
Newman, Robt L	METRO MED	125
Newman, William R	JASPER	102
Newport, Gerald	ST. LOUIS METROP.	190
Newton, Gordon	ST. LOUIS METROP.	190
Nguyen, Helen T	BUCHANAN	030
Nguyen, Lan K	LAFAYETTE-RAY	118
Nicholas, Stephen P	ST. LOUIS METROP.	190
Nicholis, G. Ronald	METRO MED	125
Nichols, David A	CALLAWAY	038
Nichols, W. Kirt	BOONE	026
Nickel, James F	ST. LOUIS METROP.	190
Nickell, Margaret B	METRO MED	125
Nickell, Michael D	JASPER	102
Nicolai, Chas H	ST. LOUIS METROP.	190
Niedermeyer, Edward L	NORTHWEST	158
Niedermeyer, Geo J	ST. LOUIS METROP.	190
Nielsen, Carl H	ST. LOUIS METROP.	190
Nieman, John L	METRO MED	125
Nierling, Dean A	BOONE	026
Niesen, Anna K	ST. LOUIS METROP.	190
Niesen, Frank J	ST. LOUIS METROP.	190
Niesen, Thomas E	ST. LOUIS METROP.	190
Nieuwenhuizen, Maarten	BOONE	026
Nigh, Chas A	ST. LOUIS METROP.	190
Nigro, Thomas L	METRO MED	125
Nishi, Toshio	ST. LOUIS METROP.	190
Nix, J. Gustavo	D-H-P-D	066
Nixon, Edward E	GRAND RIVER	078
Noback, Richardson K	METRO MED	125
Nolan, Chas J	ST. LOUIS METROP.	190
Noller, Henry W	ST. LOUIS METROP.	190
Nolph, Georgia J	BOONE	026
Nolph, Karl D	BOONE	026
Noltensmeyer, Milton H	METRO MED	125
Nomura, Roy M	ST. LOUIS METROP.	190
Nordlicht, Scott M	ST. LOUIS METROP.	190
Norland, Chas C	ST. LOUIS METROP.	190
Nouhan, Joseph G Jr.	ST. LOUIS METROP.	190
Nourbakhsh, Mahmoud M	CLAY-PLATTE	050
Nouri, Hassan	ST. LOUIS METROP.	190
Novack, Mark A	ST. LOUIS METROP.	190
Nuetzel, John A	ST. LOUIS METROP.	190
Nulton, Carrie C	METRO MED	125
Nunez, Maria A	ST. LOUIS METROP.	190
Nussbaum, Larry	CLAY-PLATTE	050
Nwaobasi, Sam	ST. LOUIS METROP.	190
Nyazee, Muhammad A	ST. LOUIS METROP.	190

O

O'Brien, Edward J Jr.	ST. LOUIS METROP.	190
O'Brien, Robert M	ST. LOUIS METROP.	190
O'Connell, Timothy	ST. LOUIS METROP.	190
O'Connor, Edward F	LAKE OF THE OZARKS	120
O'Connor, John J	F-G-W	074
O'Connor, Robert J	ST. LOUIS METROP.	190
O'Connor, Timothy P	ST. LOUIS METROP.	190
O'Donnell, Francis E	ST. LOUIS METROP.	190
O'Farrell, Thos P	METRO MED	125
O'Hearne, John J	METRO MED	125
O'Keefe, James H Jr.	METRO MED	125
O'Keefe, Jos D	ST. LOUIS METROP.	190
O'Keefe, Timothy	JASPER	102
O'Kell, Richard T	METRO MED	125
O'Malley, James F	METRO MED	125
O'Neal, Lawrence W	ST. LOUIS METROP.	190
O'Neal, Patricia L	ST. LOUIS METROP.	190
O'Neil, James H	METRO MED	125
O'Neil, Jerome H Jr.	ST. LOUIS METROP.	190
O'Reilly, D. Elliott	ST. LOUIS METROP.	190
O'Sullivan, Danl F	ST. LOUIS METROP.	190
Oakley, Margaret M	ST. LOUIS METROP.	190
Obritsch, Jerry M	BOONE	026
Occeno, Victor G	OZARKS	166
Oehler, William F	CAPE GIRARDEAU	042
Oetter, Donald L	ST. LOUIS METROP.	190
Oglesby, Richard B	ST. LOUIS METROP.	190
Ohlms, David L	ST. LOUIS METROP.	190
Ojascastro, Alejandro C	ST. LOUIS METROP.	190
Okun, Edward	ST. LOUIS METROP.	190
Oleson, Gale B	METRO MED	125
Olive, Geo C	OZARKS	166
Oliver, George A	MINERAL AREA	138
Olk, R. Joseph	ST. LOUIS METROP.	190
Olsen, Timothy W	METRO MED-RESIDENTS	126
Olson, E. Rule	GREENE	082
Olson, Lloyd C	METRO MED	125
Olson, Richard O	ST CHARLES-LINCOLN	189
Olson, Robert J	GREENE	082
Olson, Steven A	BOONE	026
Omell, Gary H	ST. LOUIS METROP.	190
Ommen, Shari L	METRO MED	125
Ong, Eng L	ST. LOUIS METROP.	190
Ong, Ofelia S	ST. LOUIS METROP.	190
Onken, Henry D	ST. LOUIS METROP.	190
Oppenheimer, Henry E	ST. LOUIS METROP.	190
Opper, Susan E	METRO MED	125
Oppermann, Karen J	METRO MED	125
Orgel, M. Norman	ST. LOUIS METROP.	190
Orgel, Michael	ST. LOUIS METROP.	190
Oro, John J	BOONE	026
Ortbals, David W	ST. LOUIS METROP.	190
Orth, O. Gerald	BOONE	026
Ortiguero, Leopoldo M	ST. LOUIS METROP.	190
Ortmeyer, Leroy F	ST. LOUIS METROP.	190
Osbourn, Richard A	CALLAWAY	038
Osgood, Brian M	METRO MED	125
Ossman, Julian A	COLE	058
Ost, Mark D	METRO MED	125
Ostapowicz, Frank	ST. LOUIS METROP.	190
Ostapowicz, Tamara L	ST. LOUIS METROP.	190
Ostergaard, Daniel J	METRO MED	125
Ott, F. Thomas	ST. LOUIS METROP.	190
Ott, Harold J	ST. LOUIS METROP.	190
Ott, Wm J	ST. LOUIS METROP.	190
Otto, Russell J	BOONE	026
Otto, Thomas G	CAPE GIRARDEAU	042
Otto, William J	GREENE	082
Overend, Don S	GREENE	082
Overesch, Harry B	METRO MED	125
Owen, James W	ST. LOUIS METROP.	190
Owen, Robt F	ST. LOUIS METROP.	190
Owens, James L	METRO MED	125
Owens, Robt H	METRO MED	125
Owens, Wm D	ST. LOUIS METROP.	190
Ozar, Milton B	METRO MED	125
Ozmat, Orhan M	ST. LOUIS METROP.	190

P

Pacheco, Jose M	GREENE	082
Pack, Keith E	ST. LOUIS METROP.	190
Packman, Paul	ST. LOUIS METROP.	190
Packman, Robt C	ST. LOUIS METROP.	190
Padilla, Pedro C	ST CHARLES-LINCOLN	189
Padilla, Teresita C	ST. LOUIS METROP.	190
Padula, Richard T	METRO MED	125
Paez, Mauro A	ST. LOUIS METROP.	190
Page, Jesse W	SEMO	202
Paine, Robert	ST. LOUIS METROP.	190
Painter, Andrew E	PEMISCOT	170
Painter, Lattie B	PEMISCOT	170
Pakula, Sidney F	METRO MED	125
Palazola, Joseph M	METRO MED	125

---

*Doctor of osteopathy

Palcheff, Chris L	GREENE	082
Palen, James E	CAPE GIRARDEAU	042
Palenske, Robt L	DUNKLIN	070
Paletta, Christian E	ST. LOUIS METROP.	190
Paletta, Francis X Sr.	ST. LOUIS METROP.	190
Paletta, Frank	ST. LOUIS METROP.	190
Paletta, Theodore L	ST. LOUIS METROP.	190
Paletta, Victor L	ST. LOUIS METROP.	190
Palmer, Russell H	NORTHEAST	150
Palmer, Stephen M	ST. LOUIS METROP.	190
Pancoast, Charles H	CAPE GIRARDEAU	042
Panek, Judy L	METRO MED	125
Paone, Douglas B	METRO MED	125
Papageorge, Dean W	CLAY-PLATTE	050
Pappalardo, Carlos	ST. LOUIS METROP.	190
Papreck, K T	SALINE	198
Paradelo, Jorge C	METRO MED	125
Pardo, Leopoldo P	ST. LOUIS METROP.	190
Pardo, Lourdes S	ST. LOUIS METROP.	190
Parelman, Allen G	METRO MED	125
Parikh, Sharad P	ST. LOUIS METROP.	190
Parikh, Smita S	ST. LOUIS METROP.	190
Paris, Wm H	ST. LOUIS METROP.	190
Park, Bert E	GREENE	082
Park, Wm I Jr	GREENE	082
Parker, Arthur C	B-W-R-C	034
Parker, Brent M	BOONE	026
Parker, Craig A	METRO MED	125
Parker, Gary J	MINERAL AREA	138
Parker, Joseph C Jr	METRO MED	125
Parker, Kim E	METRO MED	125
Parker, Thos W	ST. LOUIS METROP.	190
Parker, Wm	ST. LOUIS METROP.	190
Parkins, George K	METRO MED	125
Parks, Charles	ST. LOUIS METROP.	190
Parks, Deborah L	ST. LOUIS METROP.	190
Parra, Raul O	ST. LOUIS METROP.	190
Parrish, Steven T	METRO MED	125
Parsons, Clyde W III	GREENE	082
Parsons, D L	CAPE GIRARDEAU	042
Parsons, Richard P	ST. LOUIS METROP.	190
Partamian, Krikor O	BUCHANAN	030
Partap, Prabha	ST. LOUIS METROP.	190
Parulekar, Dilip G	CALLAWAY	038
Parwatikar, Sadashiv D	ST. LOUIS METROP.	190
Paschino, Antonio R	METRO MED	125
Paskar, Larry D	ST. LOUIS METROP.	190
Paskon, Seth	MID-MISSOURI	135
Passanante, Bartholomew M	ST. LOUIS METROP.	190
Patel, Bipin T	BUCHANAN	030
Patel, Hansa N	GRAND RIVER	078
Patel, Indu B	JEFFERSON	106
Patel, Natu B	GRAND RIVER	078
Patel, Prakesh P	BUCHANAN	030
Patel, Raman J	BUCHANAN	030
Patrick, Roman L	ST. LOUIS METROP.	190
Patterson, Donald R	JASPER	102
Patterson, Donald C	BOONE	026
Patterson, Grover S	JASPER	102
Pattison, Charles P	METRO MED	125
Patty, Carl F	B-W-R-C	034
Paulson, Gordon S	BUCHANAN	030
Pavlu, Robert F	LAFAYETTE-RAY	118
Pawsat, John E	METRO MED	125
Payne, David E	BOONE	026
Payne, John W	BOONE	026
Payne, Meredith C	ST. LOUIS METROP.	190
Pearlman, Alan L	ST. LOUIS METROP.	190
Pearman, Carl C	GREENE	082
Pearse, Carlton S	ST. LOUIS METROP.	190
Pearse, Roy W	WEST CENTRAL	214
Pearson, William E	ST. LOUIS METROP.	190
Peden, Burnet W	ST. LOUIS METROP.	190
Peden, Virginia H	ST. LOUIS METROP.	190
Peete, Don C	METRO MED	125
Pehlman, Jos E	DUNKLIN	070
Pelegrin, Robert J	LAKE OF THE OZARKS	120
Pelican, George	ST. LOUIS METROP.	190
Pendell, Paul W	METRO MED	125
Pendergrass, Kelly B	METRO MED	125
Penilla, Antonio R	ST. LOUIS METROP.	190
Penkoske, Michaele M	ST CHARLES-LINCOLN	189
Pennell, Richard C	ST. LOUIS METROP.	190
Penney, Larry L	BOONE	026
Penninger, William H	GREENE	082
Pennington, D. Glenn	ST. LOUIS METROP.	190
Pennington, Michael S	OZARKS	166
Pennoyer, James	ST. LOUIS METROP.	190
Pentella, Karen J	ST. LOUIS METROP.	190
Pepper, Edward G	ST. LOUIS METROP.	190
Pepper, Max P	ST. LOUIS METROP.	190
Pereira, MaryBeth	ST. LOUIS METROP.	190
Perez, Adamor R	ST. LOUIS METROP.	190
Perez, Blanca M	ST. LOUIS METROP.	190
Perez, Carlos A	ST. LOUIS METROP.	190
Perez, Jeannie O	ST. LOUIS METROP.	190
Perez, Robert J	ST. LOUIS METROP.	190
Perez, Romeo J	ST. LOUIS METROP.	190
Perinetti, Enrique P	ST. LOUIS METROP.	190
Perkins, David E	ST. LOUIS METROP.	190
Perll, Maurice F Jr.	METRO MED	125
Perll, Rita D	METRO MED	125
Perlmutter, John C	ST CHARLES-LINCOLN	189
Perna, Vincent P	ST CHARLES-LINCOLN	189
Pernoud, Flavius G Jr.	ST. LOUIS METROP.	190
Pernoud, Flavius G III	ST. LOUIS METROP.	190
Pernoud, Joan M	ST. LOUIS METROP.	190
Pernoud, Michael F	ST. LOUIS METROP.	190
Perry, Michael C	BOONE	026
Perry, Robert E	CAPE GIRARDEAU	042
Perry, Wm D	ST. LOUIS METROP.	190
Perryman, John C	METRO MED	125
Peters, Walter R	BOONE	026
Petersen, Eugene G	METRO MED	125
Peterson, Carl M	METRO MED	125
Peterson, Craig A	GREENE	082
Peterson, Frederick D	ST. LOUIS METROP.	190
Peterson, Jay T	METRO MED	125
Peterson, Stanley S	GREENE	082
Peterson, Walter R	METRO MED	125
Petit, Carl A	LAKE OF THE OZARKS	120
Petkovich, Frank O	ST. LOUIS METROP.	190
Petruska, Paul J	ST. LOUIS METROP.	190
*Pewitt, Charles S	CAPE GIRARDEAU	042
*Pfautsch, Mark L	CAPE GIRARDEAU	042
Pfeffer-Hurwitz, Judith	METRO MED	125
Pfefferkorn, David A	SEMO	202
Phanijphand, Suwan	B-W-R-C	034
Philgreen, Donald E	METRO MED	125
Philip, Varkey E	ST. LOUIS METROP.	190
Phillips, Abraham M	ST. LOUIS METROP.	190
Phillips, Daniel	ST. LOUIS METROP.	190
Phillips, John J	ST. LOUIS METROP.	190
Phillips, John G	ST. LOUIS METROP.	190
Phillips, Ronald L	NORTH CENTRAL	162
Phillips, Stephen W	BOONE	026
Phillips, Thomas P	METRO MED	125
Phillips, Wm J	ST. LOUIS METROP.	190
Philpott, Gordon W	ST. LOUIS METROP.	190
Phipatanakul, Supote	ST. LOUIS METROP.	190
Piccione, Leonard N	ST. LOUIS METROP.	190
Pichardo, Javier A	MINERAL AREA	138
Pickard, Clarence M	BOONE	026
Pickard, Nicholas S	METRO MED	125
Pickens, Andrew T	ST. LOUIS METROP.	190
Picker, Selwyn	ST. LOUIS METROP.	190
Pickering, Lee I	METRO MED	125
Piebenga, Larry W	METRO MED	125
Piehler, Jeffrey M	METRO MED	125
Pifer, Lawrence H	BUCHANAN	030
Pignotti, Blase J	ST. LOUIS METROP.	190
Piker, K. Dewayne	GREENE	082
Pimentel, Esperanza M	ST. LOUIS METROP.	190
Pimentel, Mauricio F	ST. LOUIS METROP.	190
Pinckley, James N	GREENE	082
Pineda, Hector O	ST. LOUIS METROP.	190
Pingelton, William B	BOONE	026
Pingleton, William W	CLAY-PLATTE	050
Pinkerton, Joseph A Jr.	METRO MED	125
Piontek, James F	CLAY-PLATTE	050
Piontek, Jerome G	ST. LOUIS METROP.	190
Piper, August T	ST. LOUIS METROP.	190
Piper, Donald K	METRO MED	125
Piper, Terrence L	ST CHARLES-LINCOLN	189

---

*Doctor of osteopathy.

Pitney, Phillip W	PIKE	186
Pitsinger, N. Bruce	ST. LOUIS METROP.	190
Pittman, C. Christopher	ST. LOUIS METROP.	190
Pittman, David L	BOONE	026
Pittman, Gerald R	ST. LOUIS METROP.	190
Pittman, Susan	ST. LOUIS METROP.	190
Place, Howard M	MID-MISSOURI	135
Place, Kenneth C	METRO MED	125
Plapp, Frederick V	METRO MED	125
Platt, William M	BOONE	026
Platz, John H	GRAND RIVER	078
Plax, Steven I	ST. LOUIS METROP.	190
Plowman, Edward M	NORTHEAST	150
Podrecca, Guido I	GREENE	082
Poger, Marshall E	ST. LOUIS METROP.	190
Poggemeier, Wm H	ST CHARLES-LINCOLN	189
Pogson, George W III	METRO MED	125
Pohl, David L	ST. LOUIS METROP.	190
Pojanasomboon, Pichat	MID-MISSOURI	135
Politi, Gregory B	METRO MED	125
Politte, Lenard L	BOONE	026
Pompushko, Rosalie	METRO MED	125
Pon, Marcelino	ST. LOUIS METROP.	190
Ponder, Terry B	B-W-R-C	034
Ponnuru, Bhaskara M	ST. LOUIS METROP.	190
Ponstingl, Raana J	ST. LOUIS METROP.	190
Pontillas, Job B	PERRY-STE GENEVIEVE	174
Poole, Anthony G	SEMO	202
Poonawala, Huseni E	METRO MED	125
Popp, Dennis A	ST. LOUIS METROP.	190
Porporis, Arthur A	ST. LOUIS METROP.	190
Porter, Charles B	METRO MED	125
Porter, Louis	METRO MED	125
Porter, Lynn W	CAPE GIRARDEAU	042
Porter, Michael J	METRO MED	125
Porter, Walter N Jr.	METRO MED	125
Portnoff, Lee S	ST. LOUIS METROP.	190
Post, Stephen L	ST. LOUIS METROP.	190
Postma, George S Jr.	METRO MED	125
Potashnick, Robert	ST. LOUIS METROP.	190
Pottenger, L. Kenneth	JASPER	102
Potter, Caryl A Jr	BUCHANAN	030
Potter, Reese H	ST. LOUIS METROP.	190
Potts, Dan E	ST. LOUIS METROP.	190
Potts, Donald A	METRO MED	125
Potts, Fred E III	GREENE	082
Powell, Alan E	METRO MED	125
Powell, Charles B	ST. LOUIS METROP.	190
Powell, Edwin M	GREENE	082
Powell, John A	ST. LOUIS METROP.	190
Powell, Kenneth R	GREENE	082
Powell, Lisa G	GREENE	082
Powers, Catherine A	METRO MED	125
Prater, Bill G	GREENE	082
Prater, Kimberley A	GREENE	082
Prater, Thomas G	GREENE	082
Prather, Charlene M	METRO MED	125
Prelutsky, David J	ST. LOUIS METROP.	190
Prensky, Arthur L	ST. LOUIS METROP.	190
Presley, Jimmy C	GREENE	082
Presnell, Cleitus A	ST. LOUIS METROP.	190
Preston, Bruce E	SOUTH CENTRAL	206
Previti, Vincent	GREENE	082
Prica, George Jr	BOONE	026
Price, Hilton I	ST. LOUIS METROP.	190
Price, Richard C	WEST CENTRAL	214
Prickett, David C Jr	CLAY-PLATTE	050
Pringle, Scot G	CAPE GIRARDEAU	042
Printz, Jos H	METRO MED	125
Pro, John D	METRO MED	125
Probst, Raymond E	ST. LOUIS METROP.	190
Probstein, Jacob G	ST. LOUIS METROP.	190
Prochaska, Mark L	METRO MED	125
Proctor, Donald C	PETTIS	178
Prokop, Jos R	BUCHANAN	030
Prophete, Yves R	ST. LOUIS METROP.	190
Proskey, Vincent J	ST. LOUIS METROP.	190
Prostic, Edward J	METRO MED	125
Pruett, Burchard S	ST. LOUIS METROP.	190
Pruett, Don S	ST. LOUIS METROP.	190
Pruett, Paul L	GREENE	082
Pryor, Harold J	METRO MED	125
Pryor, Ira Joe	JASPER	102
Psaltis, Phillip E	METRO MED	125
Puckett, Charles L	BOONE	026
Pugh, Richard G	METRO MED	125
Purcell, Harry K	ST. LOUIS METROP.	190
Purcell, John J Jr.	ST. LOUIS METROP.	190
Purcell, Paul W	CLAY-PLATTE	050
Puro, Edward A	ST. LOUIS METROP.	190
Putnam, John L	JASPER	102
Pyeatte, Jacob P Jr.	CAPE GIRARDEAU	042

Q

Qadir, Abdul	LAFAYETTE-RAY	118
Qalbani, Mahmood A	ST CHARLES-LINCOLN	189
Qazi, Nasreen	ST. LOUIS METROP.	190
Quadir, Humayum	ST. LOUIS METROP.	190
Quer, Erich A	METRO MED	125
Quiason, Arturo G	METRO MED	125
Quiason, Emmeline P	METRO MED	125
Quick, Annette M	METRO MED	125
Quick, Richard T	ST. LOUIS METROP.	190
Quick, William W	METRO MED	125
Quinn, Paul S	GREENE	082
Quinn, Rodney D	GREENE	082
Quinones, Frank S	ST. LOUIS METROP.	190
Qureshi, Abdul R	ST. LOUIS METROP.	190

R

Rabon, Nancy A	WEST CENTRAL	214
Raborar, Arteso C	GREENE	082
Racadio, Severo M	ST. LOUIS METROP.	190
Racela, Antonio S Jr.	METRO MED	125
Rachlin, Maxwell	ST. LOUIS METROP.	190
Rader, Ada E	METRO MED	125
Rader, Edward S	ST. LOUIS METROP.	190
Radford, Diane M	ST. LOUIS METROP.	190
*Radinsky, Stephen	ST. LOUIS METROP.	190
Ragland, John E	COLE	058
Rahman, Moududur	ST. LOUIS METROP.	190
Rahman, Syed Shah	ST. LOUIS METROP.	190
Raible, Michele D	METRO MED	125
Raich, Robt A	METRO MED	125
Raichle, Marcus E	ST. LOUIS METROP.	190
Rainey, Robt	ST. LOUIS METROP.	190
Raju, Niranjana	PERRY-STE GENEVIEVE	174
Raju, Padma I	ST. LOUIS METROP.	190
Rall, Kenneth L	BOONE	026
Ramakrishnan, Vasuki	D-H-P-D	066
Ramey, Ehret O	METRO MED	125
Ramirez, Jose A	ST. LOUIS METROP.	190
Ramirez, Ricardo M	B-W-R-C	034
Ramirez, Samuel G	ST. LOUIS METROP.	190
Ramirez-Inawat, Rebecca C	ST. LOUIS METROP.	190
Ramos, Americo G	METRO MED	125
Ramsey, J. Darryl	CAPE GIRARDEAU	042
*Ramsey, Jesse R	CAPE GIRARDEAU	042
Ramsey, Robt H	ST. LOUIS METROP.	190
Randolph, Bernard C	ST. LOUIS METROP.	190
Randolph, Kerry A	GREENE	082
Rangineni, Rajagopal	BUCHANAN	030
Rankin, Diane	ST. LOUIS METROP.	190
*Rankin, Wendell D	JASPER	102
Ranney, Bonnie M	MID-MISSOURI	135
Rao, Carlo	ST. LOUIS METROP.	190
Rao, Sumati	ST. LOUIS METROP.	190
Raphel, Jose	BUCHANAN	030
Rapp, Earl L	NORTHEAST	150
Rappold, Henry O	ST. LOUIS METROP.	190
Ratana, Kenny	ST. LOUIS METROP.	190
Ratkin, Gary A	ST. LOUIS METROP.	190
Ratnam, Dasari V	METRO MED	125
Rau, Michael E	F-G-W	074
Rawlins, Fred E	CAPE GIRARDEAU	042
Rawson, Perry G	F-G-W	074
Ray, David J	SOUTH CENTRAL	206
*Ray, Terry L	BOONE	026
Raybould, Michael W	METRO MED	125
Rayford, Cleveland E	METRO MED	125
Raynor, Richard C	SALINE	198
Raza, Syed A	ST. LOUIS METROP.	190
Razzaq, A.	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Rea, James L	COLE	058
Reardon, Jane D	CLAY-PLATTE	050
Reardon, Thos F	ST. LOUIS METROP.	190
Rector, Joe L	METRO MED	125
Reddy, Abbiah N	B-W-R-C	034
Reddy, Anchala N	SOUTH CENTRAL	206
Reddy, Nalini A	SOUTH CENTRAL	206
Reddy, R. Ramachandra	CAPE GIRARDEAU	042
Reddy, Sarvotham K	METRO MED	125
Reddy, Vodur C	JASPER	102
Redington, James C Jr.	ST. LOUIS METROP.	190
Redmon, Conchita M	GREENE	082
Redmond, William S	BUCHANAN	030
Rednam, Krishnarao V	ST. LOUIS METROP.	190
Reed, Glen H	WEST CENTRAL	214
Reed, Leslie G	ST. LOUIS METROP.	190
Reed, Martha A	JEFFERSON	106
Reed, Wm A	METRO MED	125
Reeder, Chas C	CLAY-PLATTE	050
Reese, Jeffrey C	BUCHANAN	030
Reese, Jon A	GREENE	082
Reese, Lester T	ST. LOUIS METROP.	190
Reeves, Col., Glen I	ST. LOUIS METROP.	190
Regier, Carl M	TRI-LAKES	208
Reh, Edward P Jr.	ST. LOUIS METROP.	190
Reh, Thos E	ST. LOUIS METROP.	190
Reichert, Timothy J	ST. LOUIS METROP.	190
Reimer, Donald R	CAPE GIRARDEAU	042
Reinhard, Edward H	ST. LOUIS METROP.	190
Reinhardt, John R	METRO MED	125
Reisler, David M	ST. LOUIS METROP.	190
Reiss, Jeanne E	METRO MED	125
Reister, Dorothy D	METRO MED	125
Reister, Philip D	METRO MED	125
Reiter, Federico B	ST. LOUIS METROP.	190
Rejent, Anthony J	ST. LOUIS METROP.	190
Remis, Robert E	BUCHANAN	030
Rendleman, Geo F Jr.	ST. LOUIS METROP.	190
Rengachary, Dhanalakshmi	METRO MED	125
Rennard, Marvin	ST. LOUIS METROP.	190
Renner, Gregory J	BOONE	026
Renner, John H	METRO MED	125
Repp, Theodore J Jr.	ST. LOUIS METROP.	190
Rettenmaier, Lawrence J	BOONE	026
Revare, Paul	CLAY-PLATTE	050
Revels, Harry III	ST. LOUIS METROP.	190
Reyes, Efraim	GREENE	082
Reyes, Jose T	ST. LOUIS METROP.	190
Reyes, Lirio M	GREENE	082
Reyes, Luis A	ST. LOUIS METROP.	190
Reynolds, Clarence C	METRO MED	125
Reynolds, James A	ST. LOUIS METROP.	190
Reynolds, Robert B Sr.	ST. LOUIS METROP.	190
Reynolds, Susan K	ST. LOUIS METROP.	190
Rezvani, Laghaieh	SEMO	202
Rhee, Dong S	ST. LOUIS METROP.	190
Rhee, Seoung E	ST. LOUIS METROP.	190
Rhoades, Charles E	METRO MED	125
Rhoads, Jack V	METRO MED	125
Rhodes, Philip G	METRO MED	125
Ribaudo, J. Michael	ST. LOUIS METROP.	190
Ricci, Walter F	METRO MED	125
Rice, Karen H	COLE	058
Rice, Kathleen G	GREENE	082
Rich, Keith M	ST. LOUIS METROP.	190
Rich, Margaret M	ST. LOUIS METROP.	190
Richards, Dean D III	METRO MED	125
Richards, Frank O	ST. LOUIS METROP.	190
Richardson, Geo A	F-G-W	074
Richardson, Lloyd D	METRO MED	125
Richardson, Marion W	METRO MED	125
Richardson, Michael S	ST. LOUIS METROP.	190
Richardson, Thos F	ST. LOUIS METROP.	190
Richardson, Tyrun K	ST CHARLES-LINCOLN	189
Richardson, Wm R	F-G-W	074
Richert, Robt C	METRO MED	125
Richmond, Michael R	ST. LOUIS METROP.	190
Ridenhour, Clarence E	BOONE	026
Ridgeway, Wm G	ST. LOUIS METROP.	190
Ridings, G R	CAPE GIRARDEAU	042
Ridings, Harold D	CAPE GIRARDEAU	042
Ries, Douglas A	ST. LOUIS METROP.	190
Rifkin, Shale	ST. LOUIS METROP.	190
Rigdon, John F	METRO MED	125
Riggio, Salvatore N	ST. LOUIS METROP.	190
Rigolosi, Ronald A	METRO MED	125
Rikli, Arthur E	BOONE	026
Riley, Chas T	LAFAYETTE-RAY	118
Riley, J P	METRO MED	125
Riley, John J	ST. LOUIS METROP.	190
Riley, Louis T	ST. LOUIS METROP.	190
Riller, Lowell E	METRO MED	125
Rinck, Edward C	WEST CENTRAL	214
Riner, Ronald N	ST. LOUIS METROP.	190
Ring, Edward M	ST. LOUIS METROP.	190
Ring, Lisa B	ST. LOUIS METROP.	190
Ringer, C. Nelson	CAPE GIRARDEAU	042
Rippe, William F	BUCHANAN	030
Rippey, John H	METRO MED	125
Rising, Dean R	GREENE	082
Ritter, C J	CAPE GIRARDEAU	042
Ritter, Carl F	CAPE GIRARDEAU	042
Ritter, Hubert A	ST. LOUIS METROP.	190
Ritter, Ray A Jr	CAPE GIRARDEAU	042
Ritter, Raymond A Sr.	CAPE GIRARDEAU	042
Ritterbusch, James K Jr.	NORTHEAST	150
Rivera, Minerva M	GRAND RIVER	078
Rivera, Pepito C	GRAND RIVER	078
Rizzo, Adolfo E	ST. LOUIS METROP.	190
Robb, Christine A	METRO MED	125
Robben, G. Garry	ST. LOUIS METROP.	190
Robbins, Philip L	ST. LOUIS METROP.	190
Robbins, Thomas D	COLE	058
Roberts, Charles C	METRO MED	125
Roberts, Fred F	METRO MED	125
Roberts, Grosvenor G	METRO MED	125
Roberts, Harold K	ST. LOUIS METROP.	190
Roberts, Howard H	JASPER	102
Roberts, John P	ST. LOUIS METROP.	190
Roberts, Perry T	CAPE GIRARDEAU	042
Roberts, Phyllis G	BUCHANAN	030
Robertson, Frank G	ST. LOUIS METROP.	190
Robertson, Wm D	B-W-R-C	034
Robinett, Wade V	METRO MED	125
Robinson, Arthur W	METRO MED	125
Robinson, Edith C	ST. LOUIS METROP.	190
Robinson, Ernest K	METRO MED	125
Robinson, Gary L	GREENE	082
Robinson, Nicholas F	DUNKLIN	070
Robinson, Ronald L	CAPE GIRARDEAU	042
Robinson, Van M	CLAY-PLATTE	050
Robinson, William J	METRO MED	125
Robinson, Wm J	METRO MED	125
Roblee, Melvin A	ST. LOUIS METROP.	190
Rockwell, Wayne L	CLAY-PLATTE	050
Roden, Vernon J	ST. LOUIS METROP.	190
Rodes, Ned D	AUDRAIN	014
Rodgers, Dorothy L	BOONE	026
Rodgers, George H	METRO MED	125
Rodgers, Nancy T	ST. LOUIS-RESIDENTS	195
Rodgers, Saml U	METRO MED	125
Rodrigo, Bernardo R	ST. LOUIS METROP.	190
Rodriguez, Gregorio L	SEMO	202
Rodriguez, Ubaldo R	ST. LOUIS METROP.	190
Roedel, Kathryn R	METRO MED	125
Roehrs, David H	PETTIS	178
Roehrs, Marvin E	SALINE	198
Rofail, Amin A	METRO MED	125
Rogers, David B	GREENE	082
Rogers, H. Bryan	ST. LOUIS METROP.	190
Rogers, James D	GREENE	082
Rogers, James T	GREENE	082
Rogers, John T	BUCHANAN	030
Rogers, Joseph Drewry	GREENE	082
Rogers, Robt L	METRO MED	125
Rohatgi, Reeta	CAPE GIRARDEAU	042
Rohrbaugh, James R	ST. LOUIS METROP.	190
Roller, James A	BOONE	026
Rollo, John L	ST. LOUIS METROP.	190
Roloson, Gary J	METRO MED	125
Romain, Rolande C	METRO MED	125
Romig, Laurie A	METRO MED	125
Rooney, William R	OZARKS	166
Rope, Douglas M	METRO MED	125
Roper, Chas L	ST. LOUIS METROP.	190
Rose, John F	GRAND RIVER	078

---

*Doctor of osteopathy

Rosecan, Marvin	ST. LOUIS METROP.	190
Roselman, Michael J	GREENE	082
Rosen, Larry A	METRO MED	125
Rosen, William K	GREENE	082
Rosenbaum, Harry D	ST. LOUIS METROP.	190
Rosenbaum, Herbert E	ST. LOUIS METROP.	190
Rosenberg, David S	ST. LOUIS METROP.	190
Rosenblum, Barry N	ST. LOUIS METROP.	190
Rosenthal, Debra D	ST. LOUIS METROP.	190
Rosenthal, Irwin I	BUCHANAN	030
Ross, Gilbert Jr.	BOONE	026
Ross, Robert M	METRO MED	125
Ross, Walter R Jr	CLAY-PLATTE	050
Ross, Wm J	ST. LOUIS METROP.	190
Rossiter, Thomas W	ST. LOUIS-RESIDENTS	195
Roter, Alexander M	ST CHARLES-LINCOLN	189
Roth, Alfred D	METRO MED	125
Roth, John J	ST. LOUIS METROP.	190
Rother, Paul H	ST CHARLES-LINCOLN	189
Rotskoff, Kenneth S	ST. LOUIS METROP.	190
Roulhac, Geo E	ST. LOUIS METROP.	190
Rouse, Ernest T	ST. LOUIS METROP.	190
Rouse, Ernest T III	ST. LOUIS METROP.	190
Roush, Geo	ST. LOUIS METROP.	190
Roush, Randall D	ST. LOUIS METROP.	190
*Routsong, Rodney T	ST. LOUIS METROP.	190
Rowe, Vernon D III	METRO MED	125
Roxas, Generoso P	ST CHARLES-LINCOLN	189
Roy, Tapankumar S	ST. LOUIS METROP.	190
Royce, James J	JASPER	102
Rozen, Jay I	METRO MED	125
Rubenstein, Melvin	ST. LOUIS METROP.	190
Rubnitz, Leon H	METRO MED	125
Rudloff, Martin	F-G-W	074
Ruehl, Albert F	ST. LOUIS METROP.	190
Rues, Lawrence A	METRO MED	125
Ruess, Robert W	CAPE GIRARDEAU	042
Ruff, Paul G	GREENE	082
Ruff, T E	B-W-R-C	034
Ruhling, Rudy	ST. LOUIS METROP.	190
Rumelt, Michael	ST. LOUIS METROP.	190
Runez, Manuel W	NORTHWEST	158
Russell, Barbara E	MID-MISSOURI	135
Russell, Earl D	GREENE	082
Russell, Garth S	BOONE	026
Russell, James L	METRO MED	125
Russell, Nancy R	CLAY-PLATTE	050
*Russell, Robert B	CAPE GIRARDEAU	042
Russell, Robt K	METRO MED	125
Russell, Steven L	CLAY-PLATTE	050
Rutherford, Barry D	METRO MED	125
Rutherford, James L	ST. LOUIS METROP.	190
Ruwitch, Joseph F Jr.	ST. LOUIS METROP.	190
Ryall, Jo-Ellyn M	ST. LOUIS METROP.	190
Ryan, David	GRAND RIVER	078
Ryan, Robert A	GREENE	082
Ryan, Robt E Sr.	ST. LOUIS METROP.	190
Ryan, Thomas J	COLE	058
Rymer, Marilyn M	METRO MED	125
Ryser, Carol A	METRO MED	125

S

Saab, Ghaleb A	JASPER	102
Sabahi, Houman	BUCHANAN	030
Sabapathy, Shawn	JASPER	102
Sabates, Felix N	METRO MED	125
Sabates, Roland	METRO MED	125
Sabet, Abdollah A	ST. LOUIS METROP.	190
Sabeti, Mohebat	ST. LOUIS METROP.	190
Saboeiro, Gregory R	ST. LOUIS-RESIDENTS	195
*Sacha, Robert F	CAPE GIRARDEAU	042
Sachar, Jerome D	ST. LOUIS METROP.	190
Sachar, Leo A	ST. LOUIS METROP.	190
Sadhu, Vijay K	BOONE	026
Saef, Jerold L	ST. LOUIS METROP.	190
Saferstein, A L	METRO MED	125
Safi, Malaz	ST. LOUIS METROP.	190
Safley, Thos J	METRO MED	125
Saghir, Marcel T	ST. LOUIS METROP.	190
Saha, Nitai C	ST. LOUIS METROP.	190
Saha, Sudha R	ST. LOUIS METROP.	190
Sakmar, Douglas A	ST. LOUIS METROP.	190
Salam, Nazih H	BOONE	026
Salanga, Percival B	ST. LOUIS METROP.	190
Saldana, Dahlia	METRO MED	125
Sale, Llewellyn Jr.	ST. LOUIS METROP.	190
Salinas, Mario	ST. LOUIS METROP.	190
Salmon, M. L.	ST. LOUIS METROP.	190
Salvador, Antonio	ST. LOUIS METROP.	190
Salvaggio, Bruce H	METRO MED	125
Samet, John M	ST. LOUIS METROP.	190
Sammon, T James	GREENE	082
Sammons, Harry C	ST. LOUIS METROP.	190
Samson, Barry L	ST. LOUIS METROP.	190
Samudrala, Ramulu	ST. LOUIS METROP.	190
Samuel, George P	B-W-R-C	034
Samuelson, Edward A	METRO MED	125
Sanchez, Abelardo B	ST. LOUIS METROP.	190
Sanchez, Guadalupe	ST CHARLES-LINCOLN	189
Sanchez, Jon J	GREENE	082
Sand, John J	METRO MED	125
Sandberg, Chris B	BUCHANAN	030
Sanders, Donald C	METRO MED	125
Sanders, Harold L	BOONE	026
Sanders, Jack S	COLE	058
Sanders, Theodore E	ST. LOUIS METROP.	190
Sanders, Wm F	METRO MED	125
Sandow, Theodore L	METRO MED	125
Sandza, Joseph G Jr.	ST. LOUIS METROP.	190
Saneman, Paul P	JASPER	102
Santanello, William M	ST. LOUIS METROP.	190
Santillano, Antonio B	ST. LOUIS METROP.	190
Santner, Floyd A	GRAND RIVER	078
Santolin, Craig	BOONE	026
Santoro, Carlos G	METRO MED	125
Sargent, Alden P	SEMO	202
Sarwark, John F	METRO MED	125
Sasser, Wm F	ST. LOUIS METROP.	190
Sata, Lindbergh S	ST. LOUIS METROP.	190
Sato, Geo	ST. LOUIS METROP.	190
Sato, Richard W	ST. LOUIS METROP.	190
Satterlee, C. Craig	METRO MED	125
Sauer, Donald C	ST. LOUIS METROP.	190
Sauer, Gordon C	METRO MED	125
Sauer, James M	GREENE	082
Sauer, Paul E	GREENE	082
Sauvage, Jacques P	ST. LOUIS METROP.	190
Savci, Hasan D.	ST. LOUIS METROP.	190
Saviers, Daniel A	BOONE	026
Sawyer, Floyd E	CLAY-PLATTE	050
Sawyer, James	ST. LOUIS METROP.	190
Saxon, Keith G	CLAY-PLATTE	050
Scacewater, Rick	JASPER	102
Scanlon, Charlotte D	METRO MED	125
*Scanlon, Robert C II	GREENE	082
Scarborough, Betty F	METRO MED	125
Scarborough, Mark R	METRO MED	125
Scearce, Robert L	COLE	058
Schaaf, Robert O	BUCHANAN	030
Schaberg, James E	ST CHARLES-LINCOLN	189
Schaefer, Glennon S	ST. LOUIS METROP.	190
Schaeffer, Edward M	GREENE	082
Schaerer, Jacques P	ST. LOUIS METROP.	190
Schane, Catherine L	GREENE	082
Schanzlin, David J	ST. LOUIS METROP.	190
Schaper, Ernest H	ST. LOUIS METROP.	190
Scharf, Daniel	METRO MED	125
Schechter, Saml E	ST. LOUIS METROP.	190
Scheele, Paul M	ST. LOUIS METROP.	190
Scheer, George E	ST. LOUIS METROP.	190
Scheibe, Robt G	ST. LOUIS METROP.	190
Scheible, Robert F	ST. LOUIS METROP.	190
*Schekorra, Fred W	COLE	058
Schell, James A	BOONE	026
Schengber, John S	ST. LOUIS METROP.	190
Scherer, Stephen	METRO MED	125
Scherr, David D	COLE	058
Schertz, Truman B	CLAY-PLATTE	050
Scheu, James H	ST. LOUIS METROP.	190
Schewe, Elmer J	BOONE	026
Schierman, Wm D	ST. LOUIS METROP.	190
Schiffmacher, Jack E	METRO MED	125
Schillie, Gene A	METRO MED	125
Schlafly, Bruce S	ST. LOUIS METROP.	190
Schlafly, Edward F JR.	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Schlansky, Howard J	ST CHARLES-LINCOLN	189
Schlansky, Seymour M	ST. LOUIS METROP.	190
Schlozman, Danl L	METRO MED	125
Schmid, Tania L	ST. LOUIS METROP.	190
Schmidt, Dennis A	ST. LOUIS METROP.	190
Schmidt, Edwin H	ST. LOUIS METROP.	190
Schmidt, Edwin H III	ST. LOUIS METROP.	190
Schmidt, Jerome H	COLE	058
Schmidt, Thomas L	METRO MED	125
Schmitz, Ralph A	BOONE	026
Schnarr, William	ST CHARLES-LINCOLN	189
Schneider, J. Michael	GREENE	082
Schneider, Paul G	ST. LOUIS METROP.	190
Schneider, Robert J	ST. LOUIS METROP.	190
Schneider, Sally L	ST. LOUIS METROP.	190
Schneider, Thos A	ST CHARLES-LINCOLN	189
Schnurr, Thomas C	OZARKS	166
Schoch, Lawrence H	ST. LOUIS METROP.	190
Schoeck, Albert F	ST. LOUIS METROP.	190
Schoedinger, George R III	ST. LOUIS METROP.	190
Schoenecker, Perry L	ST. LOUIS METROP.	190
*Schoenfeld, Roger H	JASPER	102
Schoengarth, Lowell D	BOONE	026
Schoentag, John S	ST. LOUIS METROP.	190
Schokker, Johannes	COLE	058
Schondelmeyer, R. Wade	BOONE	026
Schonfeld, Gustav	ST. LOUIS METROP.	190
Schoolman, Arnold	METRO MED	125
Schoonmaker, Gene	GREENE	082
Schopp, Alvin C	ST. LOUIS METROP.	190
Schottman, Gerhard W	METRO MED	125
Schrage, Jon P	BOONE	026
Schranck, Chas R Sr.	ST. LOUIS METROP.	190
Schreiber, David J	ST. LOUIS METROP.	190
Schreiber, Norman J	GREENE	082
Schrick, Richard E	ST. LOUIS METROP.	190
*Schroeder, Walter A Jr.	CAPE GIRARDEAU	042
Schroff, Carle E	GREENE	082
Schuessler, Edward C	ST. LOUIS METROP.	190
Schuessler, Wolfgang P	ST. LOUIS METROP.	190
Schuetz, Alfred	ST CHARLES-LINCOLN	189
Schuetz, Evelyne G	ST CHARLES-LINCOLN	189
Schuh, Marlys E	ST. LOUIS METROP.	190
Schulman, Jeffrey I	ST. LOUIS METROP.	190
Schultz, Earl R	ST. LOUIS METROP.	190
Schultz, Irwin	ST. LOUIS METROP.	190
Schulz, Richard	ST. LOUIS METROP.	190
Schutz, John P	CLAY-PLATTE	050
Schutz, Richard B	METRO MED	125
Schwartz, Eugene J	GREENE	082
Schwartz, Henry G	ST. LOUIS METROP.	190
Schwartz, Howard I	METRO MED	125
Schwartz, Howard R	GREENE	082
Schwartz, Melvin M	ST. LOUIS METROP.	190
Schwarz, Luis H	ST. LOUIS METROP.	190
Schwegler, Robert G	METRO MED	125
Schweiss, John F	ST. LOUIS METROP.	190
Schweitzer, James M	ST. LOUIS METROP.	190
Scokin, Daniel	BOONE	026
Scott, E David	COLE	058
Scott, Elwin P	ST. LOUIS METROP.	190
Scott, Horace W	ST. LOUIS METROP.	190
Scott, Jamie A	GREENE	082
Scott, Kenneth F	HENRY	086
Scott, Robert W	GREENE	082
Scott, Wendell J	GREENE	082
Scowley, John E	LAFAYETTE-RAY	118
Scully, Bruce D	WEST CENTRAL	214
Scully, Thomas F	ST. LOUIS METROP.	190
Seabaugh, Janice L	AUDRAIN	014
Seabaugh, Wm L	CAPE GIRARDEAU	042
Seagrave, Richard A	GREENE	082
Sealby, Robert L	BUCHANAN	030
Seale, Stuart A	GREENE	082
Sedgwick, William G	ST. LOUIS METROP.	190
Seeck, Linda E	F-G-W	074
Seed, John	ST. LOUIS METROP.	190
Seeley, James J	ST. LOUIS METROP.	190
Seely, Clark W	METRO MED	125
Seib, Geo A	ST. LOUIS METROP.	190
Seiden, Gerald D	METRO MED	125
Seifert, Carolyn L	MID-MISSOURI	135
Seitz, Elson F	METRO MED	125
Selhorst, John B	ST. LOUIS METROP.	190
Sells, Kenneth J	METRO MED	125
Senturia, Hyman R	ST. LOUIS METROP.	190
Seralathan, Ramasamy	GRAND RIVER	078
Sermchief, Chaiyarat	MINERAL AREA	138
Sertl, George O	ST. LOUIS METROP.	190
Sertl, James F	ST. LOUIS METROP.	190
Sertl, John D	ST. LOUIS METROP.	190
Seshumurty, Ponnuru	METRO MED	125
Seshumurty, Vimala	METRO MED	125
Sessions, Donald G	ST. LOUIS METROP.	190
Sexton, Danl L	ST. LOUIS METROP.	190
Shackter, Bruce I	GREENE	082
Shaeffer, James T	GREENE	082
Shafer, Kenneth E	SOUTH CENTRAL	206
Shaffer, Lynn R	TRI-LAKES	208
Shaffer, Stanley G	METRO MED	125
Shagets, Frank W	JASPER	102
Shah, Anwar	ST. LOUIS METROP.	190
Shah, Jayendra H	BOONE	026
Shah, Jitendra P	ST. LOUIS METROP.	190
Shah, Modaser	ST. LOUIS METROP.	190
Shah, Narendra	BUCHANAN	030
Shah, Ramesh R	JASPER	102
Shah, Sheila	BUCHANAN	030
Shahan, Philip T	ST. LOUIS METROP.	190
Shaikun, Gerald L	ST. LOUIS METROP.	190
Shakil, Mohammad	CAPE GIRARDEAU	042
Shalet, Malcolm F	METRO MED	125
Shanahan, Mary P	JASPER	102
Shanahan, Philip J	ST. LOUIS METROP.	190
Shands, Courtney III	ST. LOUIS METROP.	190
Shane, Ramon A	GREENE	082
Shaner, Thos P	ST. LOUIS METROP.	190
Shank, Robt E	ST. LOUIS METROP.	190
Shapero, James A	BOONE	026
Shapiro, A. James	GREENE	082
Shapiro, Herbert N	ST. LOUIS METROP.	190
Shapiro, Lazare M	METRO MED	125
Shapiro, Marc J	ST. LOUIS METROP.	190
Shapiro, Susan J	ST. LOUIS METROP.	190
Shapleigh, John B II	ST. LOUIS METROP.	190
Shaplin, Alfred D	JEFFERSON	106
Sharma, Janardana N	METRO MED	125
Sharma, Vidya	METRO MED	125
Sharp, Austin R	ST. LOUIS METROP.	190
Sharp, Ronald J	METRO MED	125
Sharp, Stanley P	METRO MED	125
Shatz, Burton A	ST. LOUIS METROP.	190
Shaw, Edward J	ST. LOUIS METROP.	190
Shaw, James T	F-G-W	074
Shaw, Richard C	ST. LOUIS METROP.	190
Shaw, Robert D	SOUTH CENTRAL	206
Shea, James G	F-G-W	074
Sheahon, John A	METRO MED	125
Shealy, C. Norman	GREENE	082
Shechter, Nathan	METRO MED	125
Sheehan, Michael B	METRO MED	125
Sheehan, Paul J	ST. LOUIS METROP.	190
Sheffner, Paul W	ST. LOUIS METROP.	190
Shehadi, Sameer I	ST. LOUIS METROP.	190
Shelden, Russell D	METRO MED	125
Shell, William C	SEMO	202
Shelley, William C	METRO MED	125
Shelton, Becky R	ST. LOUIS METROP.	190
Shelton, Earl W	ST. LOUIS METROP.	190
Shelton, R. Wayne	GREENE	082
Shen, Anthony S	ST. LOUIS METROP.	190
Shen, Hang C	ST. LOUIS METROP.	190
Shen, Jerome T	ST. LOUIS METROP.	190
Shen, Winston	ST. LOUIS METROP.	190
Sher, Allyn L	BOONE	026
Sheridan, John J	ST. LOUIS METROP.	190
Sherman, Laurence A	ST. LOUIS METROP.	190
Sherman, Neal J	METRO MED	125
Sherman, W. Gary	ST. LOUIS METROP.	190
Sherrod, Duane W	JASPER	102
*Sherrod, Glenn M	ST. LOUIS METROP.	190
Sherwin, Charles S	ST. LOUIS METROP.	190
Sheverini, James A	METRO MED	125
Shevlin, Chas F	BUCHANAN	030
Shieber, Wm	ST. LOUIS METROP.	190
Shields, John B	ST. LOUIS METROP.	190

---

*Doctor of osteopathy

Shields, Lawrence S	GREENE	082
Shifrin, Alexander	METRO MEO	125
Shine, Thomas E	ST. LOUIS METROP.	190
Shinn, Michael E	CLAY-PLATTE	050
Shirey, Arnold G	PEMISCOT	170
Shitut, Ravindra V	ST. LOUIS METROP.	190
Shively, Raymond E	ST. LOUIS METROP.	190
Shively, Robert A	ST. LOUIS METROP.	190
Shockley, Clarence J	METRO MEO	125
Shockley, Karen O	ST. LOUIS METROP.	190
Shore, Bernard L	ST. LOUIS METROP.	190
Short, Charles O	ST. LOUIS METROP.	190
Short, Howard N	F-G-W	074
Shoss, Milton	CAPE GIRARDEAU	042
Shroff, Kumkum	ST. LOUIS METROP.	190
Shuey, Herbert H	METRO MEO	125
Shuler, Frederick N	METRO MEO	125
Shull, G O	COLE	058
Shultz, Thomas M	GREENE	082
Shuman, Jos S	ST. LOUIS METROP.	190
Shuman, Robert B	ST. LOUIS METROP.	190
Shuttari, Mir F	ST. LOUIS METROP.	190
Shyken, Herman	ST. LOUIS METROP.	190
Sicard, Gregorio A	ST. LOUIS METROP.	190
Sicat, Alfonso V	JOHNSON	110
Siddiqui, Farzanna Q	ST. LOUIS METROP.	190
Siddiqui, Jawed H	ST. LOUIS METROP.	190
Sides, Stanley O	CAPE GIRARDEAU	042
Siegel, Barry A	ST. LOUIS METROP.	190
Siegel, Carl O	METRO MEO	125
Siegel, Charles	CLAY-PLATTE	050
Siegfried, Carla J	ST. LOUIS-RESIOENTS	195
Siemers, Geo E	ST. LOUIS METROP.	190
Siesener, Herbert H	ST. LOUIS METROP.	190
Sigmund, Charles J Jr.	ST. LOUIS METROP.	190
Sigmund, Chas A	ST. LOUIS METROP.	190
Silber, Sherman J	ST. LOUIS METROP.	190
Siler, Thomas M	ST CHARLES-LINCOLN	189
*Sill, William	ST CHARLES-LINCOLN	189
Silliman, York E	BUCHANAN	030
Silsby, Harry O	GREENE	082
Silver, Bernd	ST. LOUIS METROP.	190
Silver, Donald	BOONE	026
Silverberg, Chas	ST. LOUIS METROP.	190
Silvermintz, Saul D	ST. LOUIS METROP.	190
Simmons, Oonald O	METRO MEO	125
Simmons, Jess S	JASPER	102
Simmons, John L	METRO MED	125
Simon, David L	ST. LOUIS METROP.	190
Simon, Gracita S	CLAY-PLATTE	050
Simon, Nathan M	ST. LOUIS METROP.	190
Simons, Paul S	ST. LOUIS METROP.	190
Simowitz, Fredric M	ST CHARLES-LINCOLN	189
Simpelo, Rustico V	MINERAL AREA	138
Simpson, Albert P	GREENE	082
Simpson, Joseph	ST. LOUIS METROP.	190
Simril, Wayne A	ST. LOUIS METROP.	190
Sinasa, Surat	OUNKLIN	070
Sincox, Chas H	F-G-W	074
Singleton, John M III	METRO MEO	125
Singleton, Marvin A	JASPER	102
Sinnett, Mark F	METRO MEO	125
Siripipat, Pallop	AUORAIN	014
Sirridge, Marjorie J	METRO MEO	125
Sisk, James C	ST. LOUIS METROP.	190
Sislen, Oonald R	ST. LOUIS METROP.	190
Sisler, Maynard L	OUNKLIN	070
Sisson, Richard G	ST. LOUIS METROP.	190
Sitzmann, Bryan L	CLAY-PLATTE	050
Siu, Kenneth K C	COLE	058
Skelley, Mark J	JASPER	102
Skillman, Robt K	METRO MEO	125
Skimming, W. Lee	ST. LOUIS METROP.	190
Skinner, John T	METRO MEO	125
Skinner, John S	ST. LOUIS METROP.	190
Sklenar, Oonald E	BUCHANAN	030
Skor, Oonald A	ST. LOUIS METROP.	190
Slack, Melinda R	GREENE	082
Slahorek, George J	MIO-MISSOURI	135
Slankard, J E	METRO MEO	125
Slaughter, Carl R	CLAY-PLATTE	050
Slaughter, Larry	BOONE-RESIOENT SEC.	027
Slentz, Edwin L	METRO MEO	125
Slentz, Wm A	METRO MEO	125
Sletten, Ivan W	ST. LOUIS METROP.	190
Slocum, Stephen G	ST. LOUIS METROP.	190
Sly, Anne K	METRO MED	125
Smeltzer, Frederick M	LAKE OF THE OZARKS	120
Smid, Oavid M	GREENE	082
Smiley, Wm L	ST. LOUIS METROP.	190
Smit, Herbert M	ST. LOUIS METROP.	190
Smith, Arthur B	METRO MEO	125
Smith, Benj F	ST. LOUIS METROP.	190
Smith, Bruce D	BUCHANAN	030
Smith, C. Byron III	METRO MEO	125
*Smith, Charles H	CLAY-PLATTE	050
Smith, Claude F	SOUTH CENTRAL	206
*Smith, Cyrus D	BUCHANAN	030
Smith, Oavid Lambuth	METRO MEO	125
Smith, Oennis W	JASPER	102
Smith, Dermott A	ST. LOUIS METROP.	190
Smith, Elbert E	METRO MEO	125
Smith, Emily L	ST. LOUIS METROP.	190
Smith, Garland F	ST. LOUIS METROP.	190
Smith, Herbert P	ST. LOUIS METROP.	190
Smith, Hubert E	METRO MEO	125
Smith, Hugh R	ST. LOUIS METROP.	190
Smith, J. Ned	BOONE	026
Smith, James B	ST. LOUIS METROP.	190
Smith, Katherine W	METRO MED	125
Smith, Kathleen	ST. LOUIS METROP.	190
Smith, Kenneth B	F-G-W	074
Smith, Kenneth R Jr.	ST. LOUIS METROP.	190
Smith, Morton E	ST. LOUIS METROP.	190
Smith, O. Oale	METRO MED	125
Smith, Patrick A	BOONE	026
Smith, Peter G	ST. LOUIS METROP.	190
Smith, Reid C	METRO MEO	125
Smith, Robt W	GRANO RIVER	078
Smith, Robt W	ST. LOUIS METROP.	190
Smith, Roland T	JASPER	102
Smith, Sidney E	ST. LOUIS METROP.	190
Smith, Ted P	MIO-MISSOURI	135
Smith, W. Russell	JASPER	102
Smith, Wallace B	METRO MEO	125
Smith, Wm J	HENRY	086
Smithson, Oebra S	CAPE GIRARDEAU	042
Smoller, Martin B	ST CHARLES-LINCOLN	189
Snavely, Sharon R	METRO MED	125
Snead, William H	GREENE	082
Sneid, Oavid S	METRO MED	125
Snidle, William F	JEFFERSON	106
Snow, Emasue	GREENE	082
Snow, Jon F	GREENE	082
Snyder, Christopher H Jr	GREENE	082
Sobky, George H	ST. LOUIS METROP.	190
Soha, Joseph J	BOONE	026
Sohn, Oaniel G	BOONE	026
Sohn, Richard	ST. LOUIS METROP.	190
Solanki, Nareshkumar J	ST. LOUIS METROP.	190
Solomon, Felix G	ST. LOUIS METROP.	190
Soltys, Stephen M	BOONE	026
Sommer, Conrad S	ST. LOUIS METROP.	190
Sommer, Rand W	ST. LOUIS METROP.	190
Sommer, Ross B	ST. LOUIS METROP.	190
Somoza, Jose R	CLAY-PLATTE	050
Soonattrakul, Wuthisak	OUNKLIN	070
Soorya, Narendir T	ST. LOUIS METROP.	190
Sopuch, John A	ST. LOUIS METROP.	190
Sosebee, Lee A	BOONE	026
Sosna, Jacob P	ST. LOUIS METROP.	190
Sotiropoulos, George P	METRO MEO	125
Soto, Albert A	ST. LOUIS METROP.	190
Soucy, John C	ST CHARLES-LINCOLN	189
Sourk, Robert L	BUCHANAN	030
Southwick, Christopher L	BOONE	026
Sowash, James J	BOONE	026
Spade, Diana J	GREENE	082
Spake, R. Vanneman	METRO MEO	125
Spalding, Oavid L	GREENE	082
Spalding, Donald G	ST. LOUIS METROP.	190
Spalding, Wilber B Jr.	METRO MEO	125
Sparagana, Steven P	ST. LOUIS-RESIOENTS	195
Sparkman, Thomas C	CAPE GIRAROEAU	042
Spaulding, Kenneth A	METRO MEO	125
Speckman, Jerry M	METRO MEO	125

---

*Doctor of osteopathy

Spector, Gene W	ST. LOUIS METROP.	190
Spector, Gershon	ST. LOUIS METROP.	190
Spence, Paul A	CAPE GIRARDEAU	042
Spencer, Donald C	CALLAWAY	038
Spencer, Donald M	METRO MED	125
Spencer, Jean F	ST. LOUIS METROP.	190
Speno, Angelo A	ST. LOUIS METROP.	190
Spernoga, John F	ST. LOUIS METROP.	190
Spewak, Robert D	ST. LOUIS METROP.	190
Spies, Barbara J	METRO MED	125
Spitler, Allen L	CAPE GIRARDEAU	042
Spivack, Alan R	ST. LOUIS METROP.	190
Spoeneman, Marlin C	ST. LOUIS METROP.	190
Sponenberg, Don D	GREENE	082
Sportsman, Weldon L	CLAY-PLATTE	050
Sprague, Gita	BUCHANAN	030
Spray, Thomas L	ST. LOUIS METROP.	190
Sprehe, Samuel E	ST. LOUIS METROP.	190
Spurgat, Robert M	BUCHANAN	030
Spurgeon, Milo J	BOONE	026
Spurgeon, Stephen	ST. LOUIS METROP.	190
Spurney, Joe E	METRO MED	125
Spurny, Otto M	METRO MED	125
Spurrier, Mark H	ST. LOUIS METROP.	190
Squitieri, Alphonse J	ST. LOUIS METROP.	190
Srisuro, Chotchai	ST. LOUIS METROP.	190
Srivisal, Somnuk	ST. LOUIS METROP.	190
St. John, Donald R	JASPER	102
Staab, Gerald E	METRO MED	125
Stacey, Wallace R	METRO MED	125
Stafford, Walter R	ST. LOUIS METROP.	190
Stahl, Lloyd D	METRO MED	125
*Stahly, Randall L	CAPE GIRARDEAU	042
Stahr, William D	CAPE GIRARDEAU	042
Stallard, Donald J	BUCHANAN	030
Stamatis, John J	GREENE	082
Stanford, Carol A	METRO MED	125
Stanley, Charles G	METRO MED	125
Stanley, John H	METRO MED	125
Stanton, Danny K	METRO MED	125
Starke, Keith M	ST. LOUIS METROP.	190
Starkloff, Gene B	ST. LOUIS METROP.	190
Starks, Gregory C	METRO MED	125
Stass-Isern, Merrill L	METRO MED	125
Statland, Harry	METRO MED	125
Statland, Morris	METRO MED	125
Stauffer, Harry B	COLE	058
Stauffer, Larry K	COLE	058
Stavrides, Pete D	ST. LOUIS METROP.	190
Steele, Jack T	ST. LOUIS METROP.	190
Steele, James C	NORTHEAST	150
Steffen, Lawrence F	METRO MED	125
Steiling, Sylvia A	ST. LOUIS METROP.	190
Steiman, Barry	ST CHARLES-LINCOLN	189
Stein, Harry J	ST. LOUIS METROP.	190
Steinberg, Franz U	ST. LOUIS METROP.	190
Steinberger, Robert	F-G-W	074
*Steinbrecher, Janis M	METRO MED	125
Steiner, Alexander J	ST. LOUIS METROP.	190
Steinhardt, George F	ST. LOUIS METROP.	190
Steinhaus, David M	METRO MED	125
Stelmach, Walter J	METRO MED	125
Stephen, C. Ronald	ST. LOUIS METROP.	190
Stephens, Jack D	METRO MED	125
Stephenson, Hugh E	BOONE	026
Stephenson, Robert E	METRO MED	125
Sterkel, Richard L	ST. LOUIS METROP.	190
Stern, Thomas L	METRO MED	125
Stevens, Edward M	BUCHANAN	030
Stevens, Julia C	ST. LOUIS METROP.	190
Stewart, Harry A	METRO MED	125
Stewart, James L	CLAY-PLATTE	050
Stewart, L Paul	ST. LOUIS METROP.	190
Stewart, Robt B	GREENE	082
Stewart, Wendell	GREENE	082
Stiaszny, Louis K	METRO MED	125
Stickle, Arthur W	ST. LOUIS METROP.	190
Stickley, Louis P	ST. LOUIS METROP.	190
Stidman, Frederick C	JASPER	102
*Stillie, G. Donald	METRO MED	125
Stillings, Wayne	ST. LOUIS METROP.	190
Stinnett, D. Mitchell	JASPER	102
Stitt, Ronald W Jr.	METRO MED	125
Stockton, Raymond W	METRO MED	125
Stockwood, Robt C	PETTIS	178
*Stoddard, James M	METRO MED	125
Stoecker, Willeford J	CAPE GIRARDEAU	042
Stoecker, William V	MID-MISSOURI	135
Stohr, Paul E	ST. LOUIS METROP.	190
Stokes, James M	ST. LOUIS METROP.	190
Stoliar, Bruce	ST. LOUIS METROP.	190
Stone, Mary K	METRO MED	125
Stoneman, William III	ST. LOUIS METROP.	190
Stout, Carl N	METRO MED	125
Stoy, Robt P	BOONE	026
Stradford, H. Todd	BOONE	026
Stratemeier, Edward H	METRO MED	125
Stratman, Clarence A	CLAY-PLATTE	050
Stratmann, Henry G	ST. LOUIS METROP.	190
Straub, David L	JASPER	102
Strauss, Carl F	METRO MED	125
Strecker, William B	ST. LOUIS METROP.	190
Stribling, Thos L	METRO MED	125
Stricker, Eamil A	MID-MISSOURI	135
Stricker, Harold C	COLE	058
Stricker, William E	MID-MISSOURI	135
Stringer, Kenton L	OZARKS	166
Strobach, Kurt F	ST. LOUIS METROP.	190
Strobach, Robt L	WEST CENTRAL	214
Stromberg, Eric D	METRO MED	125
Stronach, Linda L	ST. LOUIS METROP.	190
Stronsky, David	ST. LOUIS METROP.	190
Stroud, Malcolm H	ST. LOUIS METROP.	190
Struss, Andrea L	BOONE	026
Stryker, Wm I	ST. LOUIS METROP.	190
Stuart, Byron M	BOONE	026
Stuart, Danl D	C-M-M-R	046
Stubbs, Thomas R	SOUTH CENTRAL	206
Stuber, Robert R	BUCHANAN	030
Stuebner, Roland W	ST. LOUIS METROP.	190
Stuerman, Lawrence G	PIKE	186
Stufflebam, Brian W	ST CHARLES-LINCOLN	189
Stufflebam, Robt E	GREENE	082
Stuppy, Mark S	GREENE	082
Sturtevant, Harwood N	GREENE	082
Su, Philo S	COLE	058
Suarez, Alberto	METRO MED	125
Suarez-Solar, Pedro L	ST CHARLES-LINCOLN	189
Suba, Antonio R	ST. LOUIS METROP.	190
Sublette, Glen L	METRO MED	125
Subramanian, S.	JASPER	102
Suddarth, Sterling B	METRO MED	125
Sudekum, Joseph M	ST. LOUIS METROP.	190
Sudholt, Alfred F	ST. LOUIS METROP.	190
Sueper, Robert H	ST. LOUIS METROP.	190
Sugarbaker, Everett D	COLE	058
Sulit, Arnulfo P	METRO MED	125
Sull, Won-Jong	PETTIS	178
Sullivan, Bradley H	METRO MED	125
Sullivan, Christine	METRO MED	125
Sullivan, Clement J	ST. LOUIS METROP.	190
Sullivan, Dan T	GREENE	082
Sullivan, John A	GREENE	082
Sullivan, Wm W	ST. LOUIS METROP.	190
Sumer, Cengiz M	ST. LOUIS METROP.	190
Sumer, Emel A	ST. LOUIS METROP.	190
Summers, John B	ST. LOUIS METROP.	190
Summers, Jos S	COLE	058
Summers, Thomas F	ST. LOUIS METROP.	190
Sundaram, Shankar	GREENE	082
Sundaram, Vasantha K	GREENE	082
Sundermann, Richard H	ST. LOUIS METROP.	190
Sundstrom, Frank D	GREENE	082
Sunshine, Herbert	ST. LOUIS METROP.	190
Suseela, Dasari	METRO MED	125
Susman, Lisa	METRO MED	125
Sutter, Richard A	ST. LOUIS METROP.	190
Sutton, Richard L	METRO MED	125
Suva, Morfeo M	GREENE	082
Suvan, R	B-W-R-C	034
Suwanabhand, Chalaw	WEST CENTRAL	214
Swaim, Truett	METRO MED	125
Swaney, Charles M	BOONE	026
Swanson, Howard J	METRO MED	125
Swaykus, Bernard T	ST. LOUIS METROP.	190
Sweeney, Thos P	GREENE	082

---

*Doctor of osteopathy

Sweet, Robert A	GREENE	082
Sweiger, James H	CLINTON	054
Swetnam, Jeffrey A	OZARKS	166
Swope, Joseph A	ST. LOUIS METROP.	190
Sword, Suzanne H	METRO MED	125
Sylvanovich, W. Richard	ST. LOUIS METROP.	190
Szabados, Ernest D	METRO MED	125
Szeto, J. Simon	METRO MED	125
Szoko, Edward	ST. LOUIS METROP.	190
Szymanski, Stanley R	GRAND RIVER	078

T

Tackett, Russell E	METRO MED	125
Taege, Alan J	BUCHANAN	030
Takacs, Robert J	METRO MED	125
Talbert, Clifford R	CAPE GIRARDEAU	042
Talbott, Lawrence B	METRO MED	125
Talwar, Tara	ST. LOUIS METROP.	190
Tamblyn, Claire L	METRO MED	125
Tanaka, Geo M	ST. LOUIS METROP.	190
Tanner, Robert H	COLE	058
Tanphaichitr, Kongsak	ST. LOUIS METROP.	190
Taormina, Marc K	METRO MED	125
Tarneja, Kailash C	SOUTH CENTRAL	206
Tarrasch, Ernest L	GREENE	082
Tashma, Sigmund S	ST. LOUIS METROP.	190
Tatkow, Robert W	ST. LOUIS METROP.	190
Taute, Hermann	ST. LOUIS METROP.	190
Taylor, Eugene D	ST. LOUIS METROP.	190
Taylor, John R.W.	METRO MED	125
Taylor, Leon A	COLE	058
Taylor, Philip W	CAPE GIRARDEAU	042
Taylor, Steve J	AUDRAIN	014
Taylor, William K	GREENE	082
Taylor, Wm E	GREENE	082
Tayob, Anver A	ST. LOUIS METROP.	190
*Tedrick, Phillip D	CAPE GIRARDEAU	042
Teeter, Brian H	JASPER	102
Tekwani, Hiralal T	ST. LOUIS METROP.	190
Tellow, Riyadh J	SEMO	202
Templer, Jerry W	BOONE	026
Tendai, Mark M	GREENE	082
Tenorio, Arturo A	NORTHWEST	158
Tenorio, Genoveva	NORTHWEST	158
Tepper, Arnold	ST. LOUIS METROP.	190
Ternberg, Jessie L	ST. LOUIS METROP.	190
Terry, Boyd E	BOONE	026
Terry, James F	GREENE	082
Terry, James W	CAPE GIRARDEAU	042
Terschluse, David A	ST. LOUIS METROP.	190
Tesmer, Timothy A	GREENE	082
Tess, Allen F	ST. LOUIS METROP.	190
Tess, Melvin J	ST. LOUIS METROP.	190
Tessier, John E	ST. LOUIS METROP.	190
*Tewis, Huey D	CAPE GIRARDEAU	042
Thalblum, Harvey	METRO MED	125
Thale, Thomas R	ST. LOUIS METROP.	190
Thawley, Stanley	ST. LOUIS METROP.	190
Thedinger, Bradley S	METRO MED	125
Theel, Otto W Jr.	METRO MED	125
Thibeault, Donald W	METRO MED	125
Thiel, J. Allen	ST. LOUIS METROP.	190
Thiele, Belmont R	ST. LOUIS METROP.	190
Thiele, Otto K	ST CHARLES-LINCOLN	189
Thierauf, Chas G	ST. LOUIS METROP.	190
Thies, Jerome H	WEST CENTRAL	214
Thoma, George E Jr.	ST. LOUIS METROP.	190
Thomas, Alexis G	METRO MED	125
Thomas, Christopher Y	METRO MED	125
Thomas, Fred A	CLAY-PLATTE	050
Thomas, Horace E	BOONE	026
Thomas, J. Regan	ST. LOUIS METROP.	190
Thomas, James J	METRO MED	125
Thomas, Lewis J JR	ST. LOUIS METROP.	190
*Thomas, Norvin E	AUDRAIN	014
Thomas, Robert M	BOONE	026
*Thomas-Richards, Jose R	METRO MED	125
Thomasson, David D	GREENE	082
Thomasson, Jeffrey L	ST. LOUIS METROP.	190
Thomasson, Mary W	ST. LOUIS METROP.	190
Thomasson, Robert E	ST. LOUIS METROP.	190
Thompson, David E	METRO MED	125
Thompson, F Gregg	BUCHANAN	030
Thompson, Frederick E	CLAY-PLATTE	050
Thompson, Frederick L	WEST CENTRAL	214
Thompson, M. Bryant	ST. LOUIS METROP.	190
Thompson, Paul D	CAPE GIRARDEAU	042
Thompson, Scott W	METRO MED	125
Thomson, William M	ST. LOUIS METROP.	190
Thornsberry, Michael	COLE	058
Thornton, Fred H	SEMO	202
Thorpe, William P	CAPE GIRARDEAU	042
Throne, Ben J	METRO MED	125
Thurmann, Manfred	ST. LOUIS METROP.	190
Tice, Wayne K	METRO MED	125
Tichenor, Robt W	ST. LOUIS METROP.	190
Tietjen, Fred O	LAKE OF THE OZARKS	120
Till, Bennie N	B-W-R-C	034
Tillema, David A	METRO MED	125
Tillman, Mary A	ST. LOUIS METROP.	190
Tindall, Robt N	ST. LOUIS METROP.	190
Tinsley, John C	BOONE	026
Tio, Liep T	SOUTH CENTRAL	206
Tiojanco, Milagros E	METRO MED	125
Tippett, Jack C	ST. LOUIS METROP.	190
Titterington, Frank W	METRO MED	125
Tobey, Albro C Jr.	ST. LOUIS METROP.	190
Tobin, Gregory A	CAPE GIRARDEAU	042
Tobin, Marla J	LAFAYETTE-RAY	118
Tobin, Robert F	BUCHANAN	030
Tombridge, Thos L	GREENE	082
Tominack, Rebecca L	ST. LOUIS METROP.	190
Tompson, Robt V	C-M-M-R	046
Torin, Bernice A	ST. LOUIS METROP.	190
Torontow, Raphael J	WEST CENTRAL	214
Torres, Paul	CLAY-PLATTE	050
Totty, William G	ST. LOUIS METROP.	190
Toubes, Daniel B	METRO MED	125
Towle, Daniel J	METRO MED	125
Trachtenberg, Jeffrey D	ST. LOUIS-RESIDENTS	195
Trammell, Lee W	BOONE	026
Trantham, David M	CAPE GIRARDEAU	042
Traxel, Wm L	B-W-R-C	034
Treiman, Robt C	ST. LOUIS METROP.	190
Trevor, Richard P	METRO MED	125
Trigg, Joseph F	ST. LOUIS METROP.	190
Trimble, Geo X	METRO MED	125
Trinidad, Hermanito R	GRAND RIVER	078
Triplett, Daniel A	CLAY-PLATTE	050
Triska, Roland A	ST. LOUIS METROP.	190
Troeh, Melvin R	METRO MED	125
Trotta, Philip C	ST. LOUIS METROP.	190
Trotter, Francis O Jr.	ST. LOUIS METROP.	190
Trotter, John L	ST. LOUIS METROP.	190
Trotter, W. Yates	GREENE	082
Trowbridge, Barnard C	METRO MED	125
Trowbridge, Ellsworth	METRO MED	125
Troxil, Elizabeth B	GREENE	082
True, James D	CLAY-PLATTE	050
Trueblood, Alva C	ST. LOUIS METROP.	190
Trueblood, Michael C	CAPE GIRARDEAU	042
Trugly, Edith S	ST. LOUIS METROP.	190
Tsang, John L	GREENE	082
Tschudin, Garland	ST. LOUIS METROP.	190
Tsifutis, Argyrios A	ST. LOUIS METROP.	190
Tucker, Dolores R	ST. LOUIS METROP.	190
Tucker, Eugene F	ST. LOUIS METROP.	190
Tucker, Geo L	ST. LOUIS METROP.	190
Tucker, Leslie E	F-G-W	074
Tucker, Robert E	ST. LOUIS METROP.	190
Tumanut, Benesto F	CLAY-PLATTE	050
Tungsiripat, Soros	DUNKLIN	070
Tuohy, Gerald F	METRO MED	125
Turano, Wm L	METRO MED	125
Turfboer, Robert	JASPER	102
Turgeon, Ronald P	ST. LOUIS METROP.	190
Turnbaugh, Thomas R	C-M-M-R	046
Turner, Glenn O	GREENE	082
Turner, James D	F-G-W	074
Turner, Kirby L	B-W-R-C	034
*Turner, Timothy T	ST. LOUIS METROP.	190
Turner, William A	WEST CENTRAL	214
Tutera, Dominic F	METRO MED	125
Tutera, Gino	METRO MED	125
Tuteur, Peter G	ST. LOUIS METROP.	190

---

*Doctor of osteopathy.

Tuttle, Jay F	MINERAL AREA	138
Twedell, Donald L	ST. LOUIS METROP.	190
Twyman, Richard A	METRO MED	125

U

Uchiyama, Robert C	ST. LOUIS METROP.	190
Uhlemann, John H	ST CHARLES-LINCOLN	189
Uhlemeyer, Henry A	ST. LOUIS METROP.	190
Uhrig, Jack R	SALINE	198
Umar, Ibrahim S	ST CHARLES-LINCOLN	189
Underwood, Dick H	METRO MED	125
Underwood, Johnson III	CLAY-PLATTE	050
Ungvari, Jos C	ST. LOUIS METROP.	190
Utterman, Wm F	PERRY-STE GENEVIEVE	174

V

Vacca, Jos B	ST. LOUIS METROP.	190
Vadlamani, S.	ST. LOUIS METROP.	190
Vafi, Houshang	ST. LOUIS METROP.	190
Vajaranant, Manit	LAFAYETTE-RAY	118
Valach, Frank J	ST. LOUIS METROP.	190
*Vale, Janett A	METRO MED	125
Vale, Janie R	GREENE	082
Valera, Salvador S	BUCHANAN	030
Valtierra, Cesar A	ST. LOUIS METROP.	190
Van Amburg, Albert L III	ST. LOUIS METROP.	190
Van Biber, James T	METRO MED	125
Van Buskirk, Wm C	METRO MED	125
Van Dyke, Elmer H	PETTIS	178
Van Norman, Robt T	ST. LOUIS METROP.	190
Van Osdol, Kelvin D	GREENE	082
Van Ryn, Jacques S	ST. LOUIS METROP.	190
Van Voorn, Catherine M	BOONE	026
Van Zanten, Niko A	WEST CENTRAL	214
Vandewalker, Mark L	MID-MISSOURI	135
Vandivort, Paul M Jr.	ST. LOUIS METROP.	190
Vandover, John T	ST. LOUIS METROP.	190
Vannier, Michael W	ST. LOUIS METROP.	190
VanGoidsenhoven, Guy E	ST. LOUIS METROP.	190
VanVranken, Eugene E	COLE	058
Vardeleon, Roger V	ST. LOUIS METROP.	190
Vargas, Teodoro	ST. LOUIS METROP.	190
Varma, Devendra K	B-W-R-C	034
Vatterott, Paul B	ST. LOUIS METROP.	190
Vatterott, Paul B Jr.	ST. LOUIS METROP.	190
Vaughn, James W	METRO MED	125
Vaughters, Frank M	METRO MED	125
Velander, Robert D	CAPE GIRARDEAU	042
Velasco, Ernesto T	ST. LOUIS METROP.	190
Venable, H. Phillip	ST. LOUIS METROP.	190
*Venter, John L	JASPER	102
Vera, Enrique	METRO MED	125
Verde, Julian N	ST. LOUIS METROP.	190
Verdught, Ammon L	METRO MED	125
Vergara, Gerardo G	METRO MED	125
Verzola, Eufemio G	JEFFERSON	106
Vest, James C	ST. LOUIS METROP.	190
*Vialle, Gene M	METRO MED	125
Viamontes, Jorge A	ST. LOUIS METROP.	190
Vibulakaopun, Pairat	MINERAL AREA	138
Vickar, Garry M	ST. LOUIS METROP.	190
Vierling, Stephen E	ST. LOUIS METROP.	190
Viers, Wayne A	ST. LOUIS METROP.	190
Vighi, James R	ST CHARLES-LINCOLN	189
Vijungco, Herminia D	ST. LOUIS METROP.	190
Vijungco, Jose G	ST. LOUIS METROP.	190
Villafuerte, Nila A	ST. LOUIS METROP.	190
Villafuerte, Renato G	ST. LOUIS METROP.	190
Villahermosa, Juanito L	ANDREW	010
Villamar, Elizabeth N	ST. LOUIS METROP.	190
Villanueva, Angela A	METRO MED	125
Villarama, Antonio P	ST. LOUIS METROP.	190
Vilmer, Charles E	CLAY-PLATTE	050
Vilmer, Stephen E	CLAY-PLATTE	050
Vinyard, Jack L	JASPER	102
Virant, John A	ST. LOUIS METROP.	190
Viril, Leonardo C	METRO MED	125
Vitale, Anthony J	ST. LOUIS METROP.	190
Vitale, Nicholas S	ST. LOUIS METROP.	190
Vitale, Stephen J	ST. LOUIS METROP.	190
Vivian, Gary D	ST CHARLES-LINCOLN	189
Viviano, Joseph G	ST. LOUIS METROP.	190
Vogel, Arthur P	METRO MED	125
Vogel, Curt M	BOONE	026
*Vogelsang, Judith K	METRO MED	125
Vollmar, Lewis C Jr.	ST. LOUIS METROP.	190
Vollmar, Theodore M	ST. LOUIS METROP.	190
Voshall, David L	METRO MED	125
Votaw, Robt E	ST. LOUIS METROP.	190
Voth, Harold W	METRO MED	125
Vournas, Christopher G	ST. LOUIS METROP.	190
Vournas, George C	ST. LOUIS METROP.	190

W

Wachter, Ronald M	GREENE	082
Wacker, Leo L	ST. LOUIS METROP.	190
Waddell, Kenneth E	GREENE	082
Waddell, Thomas H	METRO MED	125
Wade, Kim C	METRO MED	125
Wade, Larry A	GREENE	082
Wadlow, Ernest E	BUCHANAN	030
Waeckerle, Joseph F	METRO MED	125
Wagan, Primitiva C	ST. LOUIS METROP.	190
Waggoner, Chas M	BOONE	026
Waggoner, Sharon E	BUCHANAN	030
Wagner, John R	ST. LOUIS METROP.	190
Wagner, Paul J	METRO MED	125
Waite, John G	ST. LOUIS METROP.	190
Wakeman, J Newton Sr	GREENE	082
Wakeman, Newt Jr	GREENE	082
Wakerlin, Geo E	BOONE	026
Wald, Stanley M	ST. LOUIS METROP.	190
Waldman, Richard A	METRO MED	125
Waldorf, James C	METRO MED	125
Walentik, Corinne	ST. LOUIS METROP.	190
Walker, Ambrose T	SOUTH CENTRAL	206
*Walker, David Brooks	ST. LOUIS METROP.	190
Walker, Donald E Jr	CLAY-PLATTE	050
Walker, Francis S	ST. LOUIS METROP.	190
Walker, Gary K	GREENE	082
Walker, Harvey Jr.	ST. LOUIS METROP.	190
Walker, J Leslie	ST. LOUIS METROP.	190
Walker, Melvin O Jr.	GREENE	082
Walker, Orville C	METRO MED	125
Walker, William M	GREENE	082
Wall, Harry C	METRO MED	125
Wall, Joe A	SOUTH CENTRAL	206
Wall, Leonard A	METRO MED	125
Wall, Lester E	ST. LOUIS METROP.	190
Wall, Norman R	GREENE	082
Wallace, Darryl L	METRO MED	125
Walley, Lynn J	NORTHEAST	150
Walls, Joseph T	BOONE	026
Walsh, Barbara A	ST. LOUIS METROP.	190
Walsh, James W	ST. LOUIS METROP.	190
Walsh, Martin J	ST CHARLES-LINCOLN	189
Walsh, Richard J	BUCHANAN	030
Walter, Wm L	ST. LOUIS METROP.	190
Walters, Henry W	ST. LOUIS METROP.	190
Walters, Laura	BOONE	026
Waltman, Stephen R	ST. LOUIS METROP.	190
Walton, J. Douglas	SEMO	202
Waltrip, Roy T	SEMO	202
Waltz, James R	CLAY-PLATTE	050
Walz, Bruce J	ST. LOUIS METROP.	190
Wan, Shaw P	MID-MISSOURI	135
Wankum, Robert P	COLE	058
Wantuck, Donald K	GREENE	082
Warady, Bradley A	METRO MED	125
Ward, Joe W	LAFAYETTE-RAY	118
Ward, Mark	JASPER	102
Warres, Herbert L	GREENE	082
Washburn, John L	LAKE OF THE OZARKS	120
Wasserman, Alan	ST. LOUIS METROP.	190
Wasserman, Gary M	ST. LOUIS METROP.	190
*Wasserman, Gary S	METRO MED	125
Wasserman, Helman C	ST. LOUIS METROP.	190
Wasserman, Mark S	ST. LOUIS METROP.	190
Waterfield, Jim R	GREENE	082
Waterman, Franklin M	CLAY-PLATTE	050
Waters, Hugh R	ST. LOUIS METROP.	190
Waters, Jeffrey A	METRO MED	125
Wathanacharoen, Suchint	METRO MED	125

---

*Doctor of osteopathy.

Watkins, Geo L	MINERAL AREA	138
Watson, Tom F	GREENE	082
Watson, Trevor F	BOONE	026
Watts, Byron E	COLE	058
Watts, Clark	BOONE	026
Watts, Craig M	JOHNSON	110
Watts, Jane M	METRO MED	125
Watts, Larry K	BUCHANAN	030
Watts, Samuel M	OZARKS	166
Waxelman, Roger J	ST. LOUIS METROP.	190
Waxman, Dan A	METRO MED	125
Waxman, Herbert J	METRO MED	125
Waxman, Jane Z	METRO MED	125
Waxman, Joel E	GREENE	082
Waxman, Michael J	METRO MED	125
Waxman, Steve W	METRO MED	125
Wayne, Sherwyn J	ST. LOUIS METROP.	190
*Weaver, Bruce E	BOONE	026
Weaver, Dana J	BOONE	026
Weaver, Mark E	BOONE	026
Weaver, Michael L	METRO MED	125
Weaver, Steven C	METRO MED	125
Webb, Harry E	METRO MED	125
*Webb, James J	JASPER	102
Webb, James P	GREENE	082
Webb, John M	CLAY-PLATTE	050
Webb, Karen B	ST. LOUIS METROP.	190
Webb, Paul B Jr.	ST. LOUIS METROP.	190
Webber, Wm B	ST. LOUIS METROP.	190
Weber, J. Russell	ST. LOUIS METROP.	190
Weber, Thomas R	ST. LOUIS METROP.	190
Weber-Bornstein, Nancy	CAPE GIRARDEAU	042
Wee, Geo C	ST. LOUIS METROP.	190
Weeks, Paul M	ST. LOUIS METROP.	190
Weide, Allan R	CLAY-PLATTE	050
Weiford, Edward C	METRO MED	125
Weigel, James W	BOONE	026
Weiler, Thos J	ST. LOUIS METROP.	190
Weinand, Ernest E	BUCHANAN	030
Weinhaus, Robt S	ST. LOUIS METROP.	190
Weinstein, Chas L	METRO MED	125
Weinstein, Stephen H	BOONE	026
Weir, Don C	ST. LOUIS METROP.	190
Weir, Robt K	METRO MED	125
Weir, Royal A	ST. LOUIS METROP.	190
Weis, Landy	ST. LOUIS METROP.	190
Weiss, Alan N	ST. LOUIS METROP.	190
Weiss, Howard	ST. LOUIS METROP.	190
Weiss, James J	COLE	058
Weiss, James M	BOONE	026
*Weiss, Randy B	JASPER	102
Weiss, Stuart	ST. LOUIS METROP.	190
Weldon, Clarence S	ST. LOUIS METROP.	190
Weldon, Virginia V	ST. LOUIS METROP.	190
Wells, Donald E	METRO MED	125
Wells, James A	METRO MED	125
Wells, Samuel A Jr.	ST. LOUIS METROP.	190
Wells, Stanley D	METRO MED	125
Welsh, Clinton F	BOONE	026
Welsh, Laurence C	ST. LOUIS METROP.	190
Welsh, Thomas E III	AUDRAIN	014
Welter, Eugene S	METRO MED	125
Weltscheff, Christo A	HENRY	086
Wempe, Geo R	NORTHWEST	158
Wenneker, Alvin S	ST. LOUIS METROP.	190
Wenner, Herbert A	METRO MED	125
Werner, Dean F	CLAY-PLATTE	050
Werner, F. Scott	CLAY-PLATTE	050
Werner, Franklin C	CLAY-PLATTE	050
Werner, Wm A	ST. LOUIS METROP.	190
Werth, Claude J	METRO MED	125
Werth, Joseph A	COLE	058
*Wescott, Thomas P	JOHNSON	110
West, Harold D	METRO MED	125
West, Joseph W	ST. LOUIS METROP.	190
West, Michael A	ST. LOUIS METROP.	190
Westcott, Bruce R	CAPE GIRARDEAU	042
Westerfeld, Roy A	ST CHARLES-LINCOLN	189
Westerman, Robt N	ST. LOUIS METROP.	190
Westgate, Steven J	BOONE	026
Westhoff, David D	COLE	058
Weston, Kenneth G	BOONE	026
Westrup, Ellsworth A	ST. LOUIS METROP.	190
Wetzel, Gus S	HENRY	086
Wexler, Stephen A	ST. LOUIS METROP.	190
Weyerich, Noel F	ST. LOUIS METROP.	190
Weyman, Philip J	ST. LOUIS METROP.	190
Wheeler, Chas B	METRO MED	125
Wheeler, Jeffery	GREENE	082
Wheeler, Paul D	CLAY-PLATTE	050
Wheeler, Robt L	WEST CENTRAL	214
Whitaker, James H	METRO MED	125
White, Barry B	B-W-R-C	034
White, Bruce I	ST. LOUIS METROP.	190
White, Chas H	METRO MED	125
White, Eugene F	MID-MISSOURI	135
White, Harry H	BOONE	026
White, James S	METRO MED	125
White, Nelson P	JASPER	102
White, Newton B	ST. LOUIS METROP.	190
White, R. Ned	GREENE	082
White, Russell D	OZARKS	166
White, Stoughton F	METRO MED	125
White, Wm E	METRO MED	125
Whitehead, Clay C	BUCHANAN	030
Whitener, Miles C	ST. LOUIS METROP.	190
Whiteside, Leo A	ST. LOUIS METROP.	190
Whiting, Richard B	ST. LOUIS METROP.	190
Whitlock, C. Courtney	GREENE	082
Whitman, Daniel S	METRO MED	125
Whitmore, J. Stewart	METRO MED	125
Whitsell, O. Earl	BUCHANAN	030
Whittaker, Chas K	METRO MED	125
Whitten, J S	CAPE GIRARDEAU	042
Whitten, M. Foster	JASPER	102
Whittenberger, Brock P	CAPE GIRARDEAU	042
Whittico, James M	ST. LOUIS METROP.	190
Wiant, James R	ST. LOUIS METROP.	190
Wible, Jerry C	GREENE	082
Wice, Martin B	ST. LOUIS METROP.	190
Wiegand, Herbert C	ST. LOUIS METROP.	190
Wiele, Kimberly N	ST. LOUIS METROP.	190
Wiener, Jonathan I	ST. LOUIS METROP.	190
Wienke, Eugene C	ST. LOUIS METROP.	190
Wientzen, Arthur S	METRO MED	125
Wilber, Robt D	METRO MED	125
Wilbers, Raymond H	AUDRAIN	014
Wilbois, Ronald P	ST. LOUIS METROP.	190
Wilcox, Dennis M	METRO MED	125
Wilcox, Ruth E	JASPER	102
Wilhelm, Warren F	METRO MED	125
Wilkie, Robert G	GREENE	082
Wilkins, Michael S	METRO MED	125
Wilkinson, Chas B	METRO MED	125
Wilkinson, David	ST. LOUIS METROP.	190
Wilkinson, Everett A	METRO MED	125
Willcox, Roger A	BOONE	026
Willcoxon, Robert L	JASPER	102
Williams, Carol F	ST. LOUIS METROP.	190
Williams, Craig W	CAPE GIRARDEAU	042
Williams, Fred	BOONE	026
Williams, George A	ST. LOUIS METROP.	190
Williams, John W IV	GREENE	082
Williams, John M	CLAY-PLATTE	050
Williams, Joseph	ST. LOUIS METROP.	190
Williams, Joseph C	METRO MED	125
Williams, Kathleen M	METRO MED	125
Williams, Paul A	ST. LOUIS METROP.	190
Williams, Paul A	METRO MED	125
Williams, R. Jerome Sr.	ST. LOUIS METROP.	190
*Williams, Robert J	BUCHANAN	030
Williams, Robert D	CLAY-PLATTE	050
Williams, Roland D	METRO MED	125
Williams, Roy J Jr.	ST. LOUIS METROP.	190
Williams, Starks J	METRO MED	125
Williamson, Geo L	CLAY-PLATTE	050
Williamson, Walter E	ST. LOUIS METROP.	190
Willis, H. Robert	ST. LOUIS METROP.	190
Willman, Charles R	BUCHANAN	030
Willman, Martin L	ST CHARLES-LINCOLN	189
Willman, Vallee L	ST. LOUIS METROP.	190
Willoughby, James W	METRO MED	125
Willoughby, Jean B	METRO MED	125
Willumsen, Henry C	BUCHANAN	030
Wilson, Alice H	JASPER	102
Wilson, Chas F	CAPE GIRARDEAU	042

---

*Doctor of osteopathy

Wilson, Clifford C	METRO MED	125
Wilson, David E	CLAY-PLATTE	050
Wilson, Geo P	BOONE	026
*Wilson, James W	GREENE	082
Wilson, Roy E	GREENE	082
Wilson, Timothy A	CLAY-PLATTE	050
*Wilson, W. Timothy	GREENE	082
Wilt, David A	METRO MED	125
Wilucki, Melvin R	ST. LOUIS METROP.	190
Wimmer, Warren J	ST. LOUIS METROP.	190
Windmiller, M. Eugene	BOONE	026
Windsor, Chas E	ST. LOUIS METROP.	190
Windsor, David G	BUCHANAN	030
Winegar, Alvon C	COLE	058
Winer, Herbert J	METRO MED	125
Winer, Michael H	ST. LOUIS METROP.	190
Winer, Nathaniel	METRO MED	125
Winkelman, Esther B	METRO MED	125
Winkelmeyer, William K	BOONE	026
Winn, Geo W	BOONE	026
Winnacker, John L	BOONE	026
Winsky, Arlen D	GREENE	082
Winter, John H	ST. LOUIS METROP.	190
Winter, Tyrus D	ST. LOUIS METROP.	190
Winters, Kathleen	ST. LOUIS METROP.	190
Winthrop, James D	ST. LOUIS METROP.	190
Winton, Mark D	COLE	058
Wipfler, Earl J	ST CHARLES-LINCOLN	189
Wise, Geo W	METRO MED	125
Wise, Morris F	METRO MED	125
Wissner, Seth E	ST. LOUIS METROP.	190
Withrow, Donald	ST. LOUIS METROP.	190
Withrow, John B	CLAY-PLATTE	050
Witt, Clyde M	ST. LOUIS METROP.	190
Witt, Frederick W	ST. LOUIS METROP.	190
Witten, David M	BOONE	026
Wittgen, Edward M	ST. LOUIS METROP.	190
Wittler, Harry A	ST. LOUIS METROP.	190
Wittmer, Marc R	GREENE	082
Wittmer, Saml C	GREENE	082
Woehl, Joseph J	BUCHANAN	030
Wolanski, Eugene G	BUCHANAN	030
Wolf, Jack W	METRO MED	125
Wolf, Marion L	GREENE	082
Wolfe, Edward M	ST. LOUIS METROP.	190
Wolfe, James B	GREENE	082
Wolfe, John E	GREENE	082
Wolff, Dolores P	ST. LOUIS METROP.	190
Wolff, Gerald A	ST. LOUIS METROP.	190
Wolff, Harold D	ST. LOUIS METROP.	190
Wolff, Ray J	ST. LOUIS METROP.	190
Wolfgram, Edwin D	ST. LOUIS METROP.	190
Won, Russell	ST. LOUIS METROP.	190
Wonder, Donald	TRI-LAKES	208
Wong, George Jr.	GREENE	082
Wood, Barry C	METRO MED	125
Wood, Charles E	TRI-LAKES	208
Wood, David G	METRO MED	125
Wood, John A	ST. LOUIS METROP.	190
Wood, Thos O	B-W-R-C	034
Woodard, Chris O	ST. LOUIS METROP.	190
Woods, David A	ST. LOUIS METROP.	190
Woods, Gerald M	METRO MED	125
Woods, John J Jr.	ST. LOUIS METROP.	190
Woods, Walton C	METRO MED	125
Woodward, Wm W	METRO MED	125
Wool, Gerald	ST. LOUIS METROP.	190
Wooldridge, Wilfred E	GREENE	082
Woolery, William G	PETTIS	178
Woolsey, Joyce E	ST. LOUIS METROP.	190
Woolsey, Robt M	ST. LOUIS METROP.	190
Wooten, Michael B	GREENE	082
Workman, Chas E	CLAY-PLATTE	050
Workman, Geo M	F-G-W	074
Worley, Charles A	PETTIS	178
Worth, Eugene R	BOONE	026
Wortmann, Robt F	METRO MED	125
Wotawa, Wm J	ST. LOUIS METROP.	190
Woy, George H	CLAY-PLATTE	050
Wright, Andy J	GREENE	082
Wright, Earl J	CLAY-PLATTE	050
Wright, Jeffrey M	ST. LOUIS METROP.	190
Wright, Keith A	D-H-P-D	066
Wright, R P	METRO MED	125
Wright, Robert W III	METRO MED	125
Wright, William P	BOONE	026
Wu, Shuh Min	METRO MED	125
Wu, Wm Q	METRO MED	125
Wuellner, David H	PETTIS	178
Wulfers, Michael C	CAPE GIRARDEAU	042
Wulff, Geo J	ST. LOUIS METROP.	190
Wurm, Michael J	NORTHWEST	158
Wurr, Dieter H	ST. LOUIS METROP.	190
Wurster, Jerry B	METRO MED	125
Wurster, Mark W	METRO MED	125
Wurster, W J	METRO MED	125
Wyrsch, Leo M	GREENE	082

X

Xavier, Ravi	BOONE	026

Y

Yancey, Daniel L	GREENE	082
Yang, Chao Yung	ST. LOUIS METROP.	190
Yang, H. Kell	BOONE	026
Yang, John S	PERRY-STE GENEVIEVE	174
Yannakakis, John E	ST. LOUIS METROP.	190
Yanover, Robert A	ST. LOUIS METROP.	190
Yanow, Mitchell	ST. LOUIS METROP.	190
Yap, Mardonio J	ST. LOUIS METROP.	190
Yasin, Fazle M	ST. LOUIS METROP.	190
Yates, Darrel W	ST. LOUIS METROP.	190
Yates, Karen	CAPE GIRARDEAU	042
Yazdi, Tom M	ST. LOUIS METROP.	190
Yeast, John D	METRO MED	125
Yedlin, Jay H	METRO MED	125
Ylagan, Amando Jr.	ST. LOUIS METROP.	190
Yontz, David L	ST. LOUIS METROP.	190
Yoo, Chong-Sup	JEFFERSON	106
Yoon, Jin S	GRAND RIVER	078
Yoon, Kong-Woo	ST. LOUIS METROP.	190
Yoselevsky, Robert	ST. LOUIS METROP.	190
Yost, John G JR	METRO MED	125
Youll, Donald V	METRO MED	125
Youmans, Ronald A	METRO MED	125
Young, James E	METRO MED	125
*Young, Michael A	COLE	058
Young, Patricia A	CLAY-PLATTE	050
Young, Paul H	ST. LOUIS METROP.	190
Young, Robert A	ST. LOUIS METROP.	190
Young, Robt B	MID-MISSOURI	135
Young, Thomas J	BUCHANAN	030
Young, Vernon L	ST. LOUIS METROP.	190
Youngblood, James P	METRO MED	125
Younger, Anita C	ST. LOUIS METROP.	190
Younger, Ernest	ST. LOUIS METROP.	190
Youssef, Redwan	GRAND RIVER	078
Yu, Mario K	METRO MED	125
Yuhas, John A	JASPER	102

Z

Zacharias, Kulangara P	BOONE	026
Zahn, Robt L	GREENE	082
Zarr, James S	METRO MED	125
Zeffren, Joel L	ST. LOUIS METROP.	190
Zehnder, Kenneth W	ST. LOUIS METROP.	190
Zeigler, Jos M	ST. LOUIS METROP.	190
Zekert, Horst	ST. LOUIS METROP.	190
Zeller, William M	TRI-LAKES	208
Zerr, Charles H	METRO MED	125
Zia, Rashid	ST. LOUIS METROP.	190
Ziegler, Robert E	ST. LOUIS METROP.	190
Ziemianski, Matthew C	METRO MED	125
Zimmerman, Herbert B	ST. LOUIS METROP.	190
Zimmerman, Joe A	DUNKLIN	070
Zingale, Frank G	ST. LOUIS METROP.	190
Zinn, Marcia V	METRO MED	125
Zivnuska, Frederick R	ST. LOUIS METROP.	190
Zoffuto, Anthony C	CAPE GIRARDEAU	042
Zografakis, Geo H	ST. LOUIS METROP.	190
Zoller, David D	METRO MED	125

---

*Doctor of osteopathy

Zotos, Veronica D	ST. LOUIS METROP.	190
Zukaitis, Mark G	METRO MED	125
Zukowski, Edward T	ST. LOUIS METROP.	190
Zurowski, Susan M	BOONE	026
Zwerenz, Bruno H	METRO MED	125
Zylka, John M	ST. LOUIS METROP.	190

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

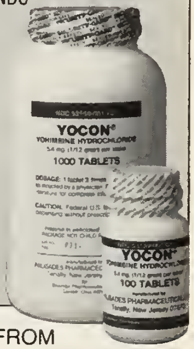
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
PALISADES PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

---

*Doctor of osteopathy.

Roster of Members by Component Society

(Please note component societies are listed in alphabetical and numerical code order.)

010—ANDREW

Baker, Warren C FP
6 Evergreen
St. Joseph, MO 64505
Kelley, Gilbert B FP
1104 W. Main
Savannah, MO 64485
816-324-3073
Villahermosa, Juanito L GS
509 S. 11th
Savannah, MO 64485
816-324-3121

014—AUDRAIN

Ahmann, Thomas M U
Landmark Bldg.
Mexico, MO 65265
Ajans, Zaki A P
704 E Monrce
Mexico, MO 65265
314-581-1785
Bradley, Wm W GP
120 N Rollins
Centralia, MO 65240
314-682-2101
Bunge, Nancy J PD
Old Farm Prof Ctr Suite B-E.
Mexico, MO 65265
314-581-5011
Carlson, John V PTH
Audrain Med Ctr
620 E. Monroe
Mexico, MO 65265
314-581-1760
Cohen, Harry B AN
Anesthesia Specialists
P O Box 598
Mexico, MO 65265
314-443-1161
Comfort, Geo D FP
Medical Bldg
626 Summit
Mexico, MO 65265
314-581-2348
Corrado, Joseph A GS
809 Medical Park Dr. #103
Mexico, MO 65265
314-581-3991
Critchlow, J. Thomas GS
809 Medical Park Drive
Mexico, MO 65265
314-581-8423
Cyriac, George K DR
620 E. Monroe
Mexico, MO 65265
314-581-1760
Davis, Leonard L ORS
1124 Tamaron Place
St. Louis, MO 63131
314-993-6855
Ekern, H. Peter FP
626 Summit
Mexico, MO 65265
314-581-2348
Forney, Joseph W CD
201 E. Monroe-Landmark Bldg.
Mexico, MO 65265
314-581-3240
Garcia, Chas L GP
13 Fairsite Dr.
Mexico, MO 65265
Gifford, David L GE
714 Medical Park Drive
Mexico, MO 65265
314-581-2152
Hoxworth, Gerald M DR
415 E Monroe
Mexico, MO 65265
314-581-1760
Huq, MD N OPH
Huq Professional Eye Service
Mexico Prof Bldg
Mexico, MO 65265
314-581-7790
Jolly, Ben L ORS
720 Medical Park Drive
Mexico, MO 65265
314-581-6831
Jolly, Benj N GS
1421 North Jefferson
Mexico, MO 65265
314-581-2780
Jones, Michael D OBG
626 Summit
Mexico, MO 65265
314-581-7040
Kallenbach, Glen P GP
Rt 5
Mexico, MO 65265
314-581-1356
Knappenberger, Kurt R ORS
3101 S.W. Lagito Drive
Topeka, KS 66614
Mullen, Mary E IM
626 Summit
Mexico, MO 65265
314-581-8530
Muraywid, Ahmad H PD
626 Summit Suite I
Mexico, MO 65265
314-581-0604
Nadinola, Chennaiah C GS
Jct Pleasant & 54 East
Farber, MO 63345
314-249-3400
Rodes, Ned D GS
625 Lakeview
Mexico, MO 65265
Seabaugh, Janice L HNS
809 Medical Park Dr.
Mexico, MO 65265
314-581-7608
Siripipat, Pallop OBG
626 Summit St
Mexico, MO 65265
314-581-7040
Taylor, Steve J GP
321 North Washington
Mexico, MO 65265
314-581-1129
*Thomas, Norvin E PUD
809 Medical Park Drive
Mexico, MO 65265
314-581-8494
Welsh, Thomas E III IM
809 Medical Park Dr. #104
Mexico, MO 65265
314-581-1040
Wilbers, Raymond H GS
Old Farm Professional Bldg
Mexico, MO 65265
314-581-2030

018—BARTON

Arnold, Herbert M GP
1204 Gulf St
Lamar, MO 64759
417-682-5584
Bickel, Vern T GS
202 West 2nd St.
Lamar, MO 64759
417-682-2161
Cain, Alvin R GP
P O Box 572
Lamar, MO 64759
417-682-3544
Carroll, Thos W GP
1204 Gulf Street
Lamar, MO 64759
417-682-5584

026—BOONE

Abadir, Rushdy TR
500 Keene
Radiation Therapy
Columbia, MO 65201
314-443-4531
Abele, Wm A IM
620 Main St
Boonville, MO 65233
816-882-7481
Abernathie, Dennis L ORS
400 Keene St.
P.O. Box O
Columbia, MO 65205
314-443-2402
Ailor, Edgar I OTO
504 Woodridge Drive
Columbia, MO 65201
314-874-3300
Al-Basha, Imad M P
2905 Blue Grass Ct.
Columbia, MO 65201
314-882-2511
Allen, Robert W PM
500 Keene St.
Columbia, MO 65201
314-449-2141
Allen, William Corwin ORS
Dept of Orthopaedics
M567 Health Science Ctr
Columbia, MO 65212
314-882-3104
Allen, Wm C GPM
508 W. Briarwood Lane
Columbia, MO 65203
314-445-4181
Alyea, James O AN
2506 Lynnwood Drive
Columbia, MO 65203
314-449-1207
Amromin, George D PTH
104 Defoe Court
Columbia, MO 65203
314-445-2348
Anderson, Daphne W D
M173 Health Sciences Center
UMCHSC One Hospital Dr.
Columbia, MO 65212
314-882-3141
Anderson, Ivan A PH
2208 Lincoln Rd.
Bettendorf, IA 52722
Anderson, Mark D IM
Div of Card Dept of IM
One Hospital Dr. UMCHSC
Columbia, MO 65212
314-882-2284
Anderson, Philip C D
Clinic 3 Health Science Ctr
Columbia, MO 65212
314-882-3141
Anderson, Thos R P
204 Berrywood Med. Arts Bldg
3401 Berrywood Dr.
Columbia, MO 65201
314-449-2661
Ansbacher, Linda E PTH
Dept of Pathology
M211 Health Science Ctr
Columbia, MO 65212
314-882-1237
Arnold, Richard C PH
814 Yale
Columbia, MO 65203
314-445-2253
Arthaud, J B PTH
Pathology Laboratories Inc.
P.O. Box 7406
Columbia, MO 65205
314-886-4600
Arthur, Gerald L PTH
P.O. Box 7406
Columbia, MO 65205
314-886-4600
Asel, Norman D D
3419 Augusta Dr.
Columbia, MO 65203
314-442-8939
Asher, Irving M N
Stephens Park Medical Bldg.
1701 E. Broadway
Columbia, MO 65201
314-449-3404
Austin, James L GS
Dept of Surgery M580
One Hospital Dr.
Columbia, MO 65212
314-882-8145
Baker, Sherwood FP
2620 Walther Ct.
Columbia, MO 65203
314-445-4065
Barbee, Chas W GS
1701 E. Broadway Suite 3
Columbia, MO 65201
314-876-1720
Beck, Marcus R PTH
601 East Rockcreek Drive
Columbia, MO 65203
314-445-6165
Beckett, Wm. Wilson ORS
201 W. Broadway
Columbia, MO 65203
314-875-4646
Beitman, Bernard D P
Dept of Psychiatry
C-6 Health Science Ctr
Columbia, MO 65212
314-882-2511
Belden, Jeffery L FP
1506 E. Broadway
Columbia, MO 65201
314-449-0808
Birkby, Wm F FP
1506 East Broadway
Columbia, MO 65201
314-449-0808

---

* Doctor of osteopathy.

Black, Samuel P NS
300 S Glenwood Street
Columbia, MO 65203
314-443-8025

Blackburn, Michael D EM
Boone Hospital Center
1600 E. Broadway
Columbia, MO 65201
314-875-3501

Blackwell, Chas W DR
201 W Broadway
Columbia, MO 65203
314-443-7430

Boles, Murray R
500 Keene St.
Columbia, MO 65201
314-443-4531

Bonham, Roger D OPH
500 Keene St.
Columbia, MO 65201
314-449-3846

Bourgeois, Curtis H PTH
P. O. Box 7406
Columbia, MO 65205
314-886-4600

Boyd, James H OTO
805 Red Oak Lane
Columbia, MO 65203
314-882-8173

Braunschweig, Ralph AN
1101 West Gleason Road
Rt. 4, Box 161
Columbia, MO 65203
314-443-2511

Brukardt, Diane T IM
Student Health Service
Univ of Mo
Columbia, MO 65211
314-882-7481

Bruner, Claude R OPH
Rte 70 Box 120
Camdenton, MO 65020
314-346-2447

Bruno, Ellen L FP
1506 E. Broadway
Columbia, MO 65201
314-449-0808

Bryant, Lester R CDS
MA204 Med Science Bldg.
Columbia, MO 65212
314-882-1566

Bucher, William C PTH
P.O. Box 7406
Columbia, MO 65205
314-886-4600

Buchert, Peter K ORS
400 Keene St. POBox O
Columbia, MO 65205
314-443-2402

Buescher, Lucinda S D
M173 Univ Hospt Dept of Derm
1 Hospital Drive
Columbia, MO 65212
314-882-3141

Bumgarner, James E U
703 W. Rollins Rd.
Columbia, MO 65203
314-442-0252

Bumgarner, Roger W AN
1501 Rustic Road
Columbia, MO 65201
314-442-5448

Burks, Michael L OBG
N603 One Hospital Drive
Columbia, MO 65212
314-882-7937

Burns, Robert P OPH
Dept of Ophalmology
Mason Institute of Oph
Columbia, MO 65212
314-882-1027

Burns, Thos W IM
310 E Brandon Rd
Columbia, MO 65203
314-882-2273

Butt, James H GE
A220C VA Hospital
800 Hospital Dr.
Columbia, MO 65201
314-445-6672

Bynum, Wm R PTH
3208 Woodvalley Way
Columbia, MO 65203
314-443-7728

Campbell, Gregory S OTO
Dept of OTO
1 Hospital Dr.
Columbia, MO 65212
314-882-8173

Cardwell, Michael S OBG
Dept of OBG N610 HSC
1 Hospital Drive
Columbia, MO 65212
314-882-7937

Carnahan, Chas E PD
Boone Clinic
401 Keene St.
Columbia, MO 65201
314-876-1620

Carter, James S CDS
1701 E. Broadway Suite 3
Columbia, MO 65201
314-876-1720

Carter, Ronald D ORS
400 Keene St.
P. O. Box O
Columbia, MO 65205
314-443-2402

Chalkley, Judson I DR
614 W. Stewart Rd.
Columbia, MO 65203
314-449-6496

Chang, Chil K AN
1210 Danforth Dr.
Columbia, MO 65201
314-449-1207

Cheek, Chas W OPH
Columbia Eye Consultants
500 Keene St.
Columbia, MO 65201
314-449-3846

Chitwood, G. Glen DR
Radiology Consultants
1502 E. Broadway
Columbia, MO 65201
314-443-4591

Clark, David P IM
Div Derm. M173 Hlth Sci Ctr.
One Hospital Drive
Columbia, MO 65212
314-882-3141

Clark, Frank I PD
404 Cumberland
Columbia, MO 65203
314-882-4932

Cole, Donald E AN
2601 Hillshire Drive
Columbia, MO 65203
314-882-2568

Colwill, Jack M FP
Rt 11 Countryshire Estates
Columbia, MO 65202
314-882-2996

Conway, Robert R PMR
5R-01 Rusk Rehab Center
Columbia, MO 65212
314-882-3101

Cope, James C U
441 Lake Murex Circle
Sanibel, FL 33957

Crouch, John A CDS
1701 E. Broadway Suite 3
Columbia, MO 65201
314-876-1720

Crowley, Wm J N
Dept of Neurology
M741 HSC
Columbia, MO 65212
314-882-3133

Cunningham, Milamari A AN
Cunningham Anesthesia
P. O. Box 1301
Columbia, MO 65205
314-442-2237

Cupp, Gerald V CD
401 Keene St.
Columbia, MO 65201
314-874-3300

Curry, Michael D PTH
2703 Clark Lane
P. O. Box 7406
Columbia, MO 65205
314-886-4600

Curtis, Jack J CDS
Cardiothoracic Surgery
MA312 Health Science Ct
Columbia, MO 65212
314-882-6954

Daly, James W OBG
N-617 Health Science Ctr
Dept. of OBG
Columbia, MO 65212
314-882-6361

Darnell, Thos F D
8C Oak Court
Branson, MO 65616
314-334-6230

Davis, Wm E OTO
Department of Otolaryngology
M583 Health Science Ctr
Columbia, MO 65212
314-882-8173

Dean, Francis D GP
309 S. Main St.
Fayette, MO 65248
816-248-2261

Delwood, Don M IM
Boone Clinic
401 Keene St.
Columbia, MO 65201
314-449-5933

Dempsey, Maureen E PD
1600 Skylane Drive
Columbia, MO 65201
314-882-4932

Denninghoff, James S OTO
3401 Berrywood
Columbia, MO 65201
314-874-2192

Denninghoff, James C IM
1906 Vassar
Columbia, MO 65203
314-449-1227

Devkota, Jagadishwar DR
3212 Shoreside Drive
Columbia, MO 65203
816-665-7241

Dexheimer, Frank R GS
401 Keene
Columbia, MO 65201
314-874-3300

Dexter, James D N
Department of Neurology
M741 Health Science Ctr
Columbia, MO 65212
314-882-3133

DeSpain, John D D
Dept of Derm
Health Sciences Ctr
Columbia, MO 65212
314-882-3141

Diaz-Arias, Alberto A PTH
117 Anderson
Columbia, MO 65203
314-882-1221

Diaz-Arias, Michele A IM
117 Anderson
Columbia, MO 65203
314-882-4141

Dick, Mary M P
Rt. 1, Box 134A
Ashland, MO 65010
314-449-5800

Ditmore, Q Michael NS
1701 E. Broadway
Columbia, MO 65201
314-449-3409

Dooley, Thomas W PS
M349 #1 Hospital Dr.
Columbia, MO 65212
314-882-2275

Dueker, David K OPH
EC-139 Mason Eye Institute
Health Science Ctr
Columbia, MO 65212
314-882-1027

Duong, Mo Hong PTH
Ellis Fischel State Cancer
115 Business Loop 70 W
Columbia, MO 65203
314-875-2100

Eckenrode, James F ORS
400 Keene St. P.O.Box O
Columbia, MO 65205
314-443-2402

Eggers, George W Jr. AN
Department of Anesthesiology
3N15 Health Science Ctr
Columbia, MO 65212
314-882-2568

Eppright, Thomas D P
501 Cedar Lane
Columbia, MO 65202
314-474-1107

Estrem, Scott A OTO
MA314 Medical Science
1 Hospital Drive
Columbia, MO 65212
314-882-8173

Favazza, Armando R P
Department of Psychiatry
6 Health Science Ctr
Columbia, MO 65212
314-449-2511

Ferneau, James E OBG
401 Keene St
Columbia, MO 65201
314-874-3300

Ferrari, Heriberto A AN
Department of Anesthesiology
3N15 Health Science Ctr
Columbia, MO 65212
314-882-8159

Foote, Jerry E D
1504 E Broadway
Columbia, MO 65201
314-442-3565

Frazier, Robt E P
113 W Broadway
Columbia, MO 65203
314-443-1508

Freeman, James A CD
Boone Clinic
401 Keene Street
Columbia, MO 65201
314-876-1630

Fuchs, Geo J GYN
P. O. Box 658
Columbia, MO 65203

---

* Doctor of osteopathy.

Gaines, Robert W ORS
M562 Health Sciences Ctr
1 Hospital Drive
Columbia, MO 65212
314-882-3106

Gainor, Barry J ORS
Department of Orthopaedics
M562 Health Science Ctr
Columbia, MO 65212
314-882-3104

Gaitonde, Mangesh R P
4393 Breezy Point
Lee's Summit, MO 64082

Garrett, Elizabeth A FP
Family & Community Med MA228
Health Sciences Ctr
Columbia, MO 65212
314-882-4991

Garrotto, Lewis J DR
3100 Woodkirk Dr.
Columbia, MO 65203
314-449-3931

Gay, John W OBG
Dept of OBG Univ Hosp & Clin
One Hospital Drive
Columbia, MO 65212
314-882-7937

Gerhardt, Donald C IM
401 Keene St.
Columbia, MO 65201
314-874-3300

Giangiacomo, Joseph OPH
EC-135 Mason Eye Institute
Health Sciences Ctr
Columbia, MO 65212
314-882-1027

Goldstein, David E PD
Department of Child Health
M769 Health Science Ctr
Columbia, MO 65212
314-882-6979

Gordon, Bruce J AN
Columbia Anesthesia Assoc.
P. O. Box 7041
Columbia, MO 65205
314-449-1207

Grant, Mark OBG
Dept of OBG UMCH&C
One Hospital Drive
Columbia, MO 65212
314-882-4141

Griffin, Wm T OBG
Department of OB/GYN
N625 Health Science Ctr
Columbia, MO 65212
314-882-7937

Groshong, Ted D PD
Department of Child Health
MA204 Health Science Ct
Columbia, MO 65212
314-882-1566

*Guenthner, Brenda L PM
#2A Broadway Village Dr.
Columbia, MO 65201
314-882-3101

Gumerlock, Mary K NS
Dept of Surg Div of NeuroSur
UMHSC One Hospital Dr.
Columbia, MO 65212
314-882-4908

Gupta, Nilakshi AN
Univ of Mo Dept of Anes
N314 HSC
Columbia, MO 65212
314-882-2568

Gurucharri, Vincent P TS
3401 Berrywood
Suite 104
Columbia, MO 65201
314-443-8773

Guyer, Emily PD
102 Student Health Center
University of Missouri
Columbia, MO 65211
314-882-7481

Hall, David G III OBG
Box 232, Roby Farm Road
Rocheport, MO 65279
314-698-4855

Hardin, David B PM
5R-01 Rusk Rehab Ctr
Columbia, MO 65212
314-882-3101

Harris, Hugh S Jr. GS
3401 Berrywood Dr.
Suite #104
Columbia, MO 65201
314-443-8773

Harris, Robt J PD
Boone Clinic
401 Keene St.
Columbia, MO 65201
314-876-1620

Harrison, Winston E U
1220 Sunset Dr
Columbia, MO 65203
314-443-0596

Havey, Ann D PTH
112 Bingham Rd.
Columbia, MO 65203
314-882-8154

Havey, John ORS
201 West Broadway
Columbia, MO 65203
314-875-6109

Haw, Marvin T GER
1999 Pounds Rd.
Festus, MO 63028

Heimburger, Elizabeth M P
200 East Walnut Street
Columbia, MO 65203
314-875-5151

Heimburger, Richard A PS
1504 East Broadway Ste 217
Columbia, MO 65201
314-449-0508

Helikson, Mary A PDS
Dept. of Gen. Surg.
N307A Health Science Ct
Columbia, MO 65212
314-882-4156

Henzel, John H VS
1504 E. Broadway
Columbia, MO 65201
314-874-2158

Highland, Thomas P ORS
400 Keene St. P. O. Box O
Columbia, MO 65205
314-443-2402

Hof, Jem J PM
Department of PMP UMC
1 Hospital Drive
Columbia, MO 65212
314-882-3101

Hofmeister, Roger W FP
Ellis Fischel Cancer Ctr
115 Business Loop 70 W
Columbia, MO 65203
314-875-2100

Holekamp, Timothy OPH
500 Keene St. Suite 102
Columbia, MO 65201
314-449-3846

Holmes, Richard A NM
1111 Lakeside Drive
Columbia, MO 65203
314-443-2511

Hoyt, Terry S DR
1237 Sunset Drive
Columbia, MO 65203
314-443-2511

Hughes, Derek P
4104 Rollins Road
Columbia, MO 65203
314-876-8000

Humphreys, Edward T GS
1123 Third St.
Boonville, MO 65233

Husain, S. Arshad CHP
2602 Johnson Drive
Columbia, MO 65203
314-882-8006

Ide, Carl H OPH
1008 Bourn Ave
Columbia, MO 65203
314-882-1028

Irvin, William S IM
401 Keene Street
Columbia, MO 65201
314-874-3340

Jackson, Robert L PD
39th & Rainbow
Kansas City, KS 66103
913-588-6326

James, Elizabeth J PD
Department of Child Health
N723 Health Science Ctr
Columbia, MO 65212
314-882-7919

James, Ronald C END
610 W Blvd South
Columbia, MO 65203
314-443-2447

Johnson, Richard E PTH
129 Lindell Drive
Columbia, MO 65203
314-442-7237

Judy, Joseph D IM
745 Church
Beloit, WI 53511

Kaplan, Michael F PS
Plastic & Reconstructive Sur
1701 E. Broadway
Columbia, MO 65201
314-876-1700

Kaplan, Paul E PM
5R01 Rusk Rehab
Columbia, MO 65212
314-882-3101

Kennett, Jerry D CD
401 Keene St.
Columbia, MO 65201
314-876-1630

King, Robert J U
500 Keene St. #207
Columbia, MO 65201
314-449-6260

Klachkc, David M IM
Cosmopolitan Diabetes Ctr
Health Science Ctr.
Columbia, MO 65212
314-882-2265

Knudson, Dennis R OTO
2100 Southwood Dr.
Columbia, MO 65201
314-874-3300

Krechel, Susan W AN
Dept of Anes #3N15
Health Sciences Ctr
Columbia, MO 65212
314-882-2568

Ladenson, Roland P IM
704 Westmount Ave.
Columbia, MO 65203
314-449-6997

Lamberti, Jos W P
Department of Psychiatry
6 Health Science Ctr.
Columbia, MO 65212
314-882-2511

Lampton, Lawrence M PUD
Doctor's Clinic Bldg.
1502 East Broadway
Columbia, MO 65201
314-874-3371

Landhuis, Leo R OPH
Eye Research Foundation
404 Portland St
Columbia, MO 65201
314-442-0017

Landreneau, Rodney J CDS
2705 Vail Drive
Columbia, MO 65203

Landrum, Alice L AN
1121 S. Hickory Grove School
Rocheport, MO 65279

Laramore, Rosemary P
3508 Bray Ave.
Columbia, MO 65203
314-751-2929

Laster, Jerry L GS
N-512 1 Hospital Dr.
Columbia, MO 65212
314-882-3959

Lee, H. T. DR
1502 E. Broadway
Columbia, MO 65201
314-443-4591

Leech, Maurice P GP
920 W. Davis
Fayette, MO 65248
816-248-2261

Leeper, Claude K PTH
2016 Ivy Way
Columbia, MO 65203
314-445-3358

Leeper, Sidlee W IM
3655 Route O
Columbia, MO 65203
314-445-6569

Lepkowski, Hemlata K R
2512 Vista View Terrace
Columbia, MO 65203
816-449-3931

Lepkowski, Marek B U
2512 Vista View Terrace
Columbia, MO 65203
314-449-0570

Lising, Alexander A PMR
1504 East Broadway
Columbia, MO 65201
314-874-5080

Litton, Lynn O ORS
45 Compton Court
Prairie Village, KS 66208

Litwiller, Raymond W GP
2707 Estevan Ave. Apt 302
Victoria Brit. Columbia
Canada V8R2T5, 00000

Llorens, Alfred S OBG
Department of OB/GYN
N607 Health Science Ctr
Columbia, MO 65212
314-882-1057

Loeppky, Carol B IM
113 W. Broadway
Columbia, MO 65203
314-449-0088

Logue, John T IM
912 Crestland Ave.
Columbia, MO 65203
314-449-5369

Lohmar, Roland E IM
113 W Broadway
Columbia, MO 65203
314-449-0088

Long, John W CDS
1701 E. Broadway Suite 3
Columbia, MO 65201
314-876-1720

Martin, Richard W PD
Boone Clinic
401 Keene St.
Columbia, MO 65201
314-874-3300

---

* Doctor of osteopathy.

Matias, Delia A PD
1504 E. Broadway
Columbia, MO 65201
314-875-2505

McCord, E. Scott AN
Department of Anesthesiology
N315 Health Science Ctr
Columbia, MO 65212
314-882-2568

McDavid, Robert E OBG
Women's Health Associates
201 West Broadway
Columbia, MO 65203
314-443-8796

McElroy, Glenn L ORS
3416 Woodrail Terrace
Columbia, MO 65203
314-443-2402

Mechlin, David C OTO
3401 Berrywood Dr. Ste. 301
Columbia, MO 65201
314-874-2192

Metzler, Michael H GS
Departmen of General Surgery
N307 Health Science Ctr
Columbia, MO 65212
314-882-8157

Miller, Leroy J FP
32 Bingham Rd.
Columbia, MO 65203
314-442-4025

Millwee, Elizabeth M GP
108 E. Green Meadows #1
Columbia, MO 65203
314-449-2444

Mitchell, Franklin L GS
2200 Danforth Ct
Columbia, MO 65201
314-882-7956

Mitchell, Lynn D IM
401 Keene
Columbia, MO 65201
314-876-1600

Molina, Roy IM
401 Keene
Columbia, MO 65201
314-876-1600

Monaghan, Greg G HEM
Hematology-Oncology Assoc.
3401 Berrywood Ste 303
Columbia, MO 65201
314-874-7800

Monroe, C. Dean P
405 Bernadette Dr. Suite B
Columbia, MO 65203
314-445-2362

Morgan, W. Tom Jr. FP
2802 Butterfield Ct.
Columbia, MO 65203
314-874-0008

Morris, John J GP
P. O. Box 537
Columbia, MO 65205
314-874-3266

Mosby, Larry D PTH
107 E Brandon Rd
Columbia, MO 65203
314-886-4600

Murrell, H. Jerry TR
3600 W. Vaughter School Rd.
Columbia, MO 65203
314-875-3349

Muscato, Joseph J HEM
3401 Berrywood Dr.
Columbia, MO 65201
314-874-7800

Muscato, Mary S HEM
607 Randy Lane
Columbia, MO 65201
314-874-7800

Nanson, James D IM
1701 East Broadway
Columbia, MO 65201
314-449-4999

Nichols, W. Kirt GS
Dept of Surg.
N303 Health Science Ctr
Columbia, MO 65212
314-882-7136

Nierling, Dean A EM
Emergency Center
Univ Hospitals & Clinic
Columbia, MO 65212
314-882-8091

Nieuwenhuizen, Maarten P
3916 Faurot Dr
Columbia, MO 65203

Nolph, Georgia J FP
908 Hickory Hill Dr.
Columbia, MO 65203
314-882-6191

Nolph, Karl D NEP
Dept of Med
MA436 Health Science Ct
Columbia, MO 65212
314-882-7991

Obritsch, Jerry M OBG
2801 W Broadway #H3
Columbia, MO 65203
314-882-9013

Olson, Steven A ORS
1743 Sonora
Columbia, MO 65201
314-882-8178

Oro, John J NS
Department of Neurosurgery
N522 Health Science Ctr
Columbia, MO 65212
314-882-4908

Orth, O. Gerald NS
1701 E. Broadway Suite 3
Columbia, MO 65201
314-449-3407

Otto, Russell J GS
4709 Knox Drive
Columbia, MO 65203
314-445-0524

Parker, Brent M CD
703 Huntridge Drive
Columbia, MO 65201
314-882-2284

Patterson, Donald C GYN
500 Keene St. Suite 206
Columbia, MO 65201
314-442-2221

Payne, David F D
401 Keene St.
Columbia, MO 65201
314-874-3300

Payne, John W ORS
Route 5
Fulton, MO 65251
314-642-4234

Penney, Larry L OBG
2412 Cimarron Dr.
Columbia, MO 65203

Perry, Michael C ONC
Department of Medicine
MA406C Hlth Science Ctr
Columbia, MO 65212
314-882-4979

Peters, Walter R GS
Columbia Surgical Assoc.
3401 Berrywood #104
Columbia, MO 65201
314-443-8773

Phillips, Stephen W DR
1502 E. Broadway
Columbia, MO 65201
314-443-4591

Pickard, Clarence M IM
203 W Broadway
Columbia, MO 65203
314-449-4101

Pingelton, William B GYN
113 W Broadway
Columbia, MO 65203
314-449-5766

Pittman, David L PTH
2703 Clark Lane
P. O. Box 7406
Columbia, MO 65205
314-886-4600

Platt, William M PM
Physical Medicine and Rehab
501 Rusk One HospitalDr
Columbia, MO 65212
314-882-3101

Politte, Lenard L CD
401 Keene St
Columbia, MO 65201
314-876-1630

Prica, George Jr FP
Family Health Care
1506 E. Broadway
Columbia, MO 65201
314-449-0808

Puckett, Charles L PS
Department of Plastic Surg
M349 Health Science Ctr
Columbia, MO 65212
314-882-2275

Rall, Kenneth L R
1415 Overhill Road
Columbia, MO 65203

*Ray, Terry L AN
1506 E. Broadway
P.O. Box 7041
Columbia, MO 65205
314-449-1207

Renner, Gregory J OTO
Dept Of Oto.
MA314 Health Science Ct
Columbia, MO 65212
314-882-8173

Rettenmaier, Lawrence J IM
4317 Germantown
Columbia, MO 65203
314-882-4141

Ridenhour, Clarence E GS
Route 13 Cedar Grove
Columbia, MO 65201
314-874-3111

Rikli, Arthur E GPM
4003 Faurot Dr
Columbia, MO 65203
314-445-6480

Rodgers, Dorothy L GYN
Student Health Center
Univ of MO-Col
Columbia, MO 65211
314-882-7485

Roller, James A D
3401 Berrywood
Columbia, MO 65201
314-875-1527

Ross, Gilbert Jr. U
Dept. of Urology
N510 Health Science Ctr
Columbia, MO 65212
314-882-0494

Russell, Garth S ORS
400 Keene St. P.O.Box O
Columbia, MO 65205
314-443-2402

Sadhu, Vijay K DR
1502 E. Broadway
Columbia, MO 65201
314-443-4591

Salam, Nazih H CDS
Dept of Surg Div of CardSurg
One Hospital Drive
Columbia, MO 65212
314-882-6954

Sanders, Harold L DR
1502 E Broadway
Columbia, MO 65201

Santolin, Craig CD
1883 G. Waterfront Dr. North
Columbia, MO 65202
314-882-2296

Saviers, Daniel A PM
Rusk Rehab 1 Hospital Drive
Columbia, MO 65212
314-882-3101

Schell, James A IM
3401 Berrywood Dr.
Columbia, MO 65201
314-442-3169

Schewe, Elmer J GS
1232 Sunset Dr.
Columbia, MO 65203
314-442-1272

Schmitz, Ralph A FP
311 Westridge Drive
Columbia, MO 65203
314-882-2162

Schoengarth, Lowell D OPH
Columbia Eye Consultants
500 Keene St.
Columbia, MO 65201
314-449-3846

Schondelmeyer, R. Wade IM
3217 S. Providence
Columbia, MO 65203
314-449-3333

Schrage, Jon P IM
Dept of Mental Health
1915 Southridge Dr.
Jefferson City, MO 65109
314-751-2925

Scokin, Daniel PD
300 E. Burnam Road
Columbia, MO 65203
314-882-4932

Shah, Jayendra H END
VA Hospital Med Svc
800 Hospital Dr.
Columbia, MO 65201
314-443-2511

Shapero, James A P
1701 East Broadway
Columbia, MO 65201
314-876-1740

Sher, Allyn L N
Neurology INC.
500 Keene St.
Columbia, MO 65201
314-449-2141

Silver, Donald VS
Department of General Surg
M580 Health Science Ctr
Columbia, MO 65212
314-882-8178

Smith, J. Ned IM
Department Of Medicine
M463 Health Science Ctr
Columbia, MO 65212
314-443-2511

Smith, Patrick A ORS
400 Keene St. P.O.Box O
Columbia, MO 65205
314-443-2402

Soha, Joseph J DR
114 Arbor Drive
Columbia, MO 65201
314-449-3931

Sohn, Daniel G PM
5R-01 Rusk Rehab Center
One Hospital Dr.
Columbia, MO 65212
314-882-1512

---

* Doctor of osteopathy.

Soltys, Stephen M P
Mid-Missouri Mental Health
3 Hospital Drive
Columbia, MO 65201
314-449-2511

Sosebee, Lee A ORS
2709 Malibu Court
Columbia, MO 65203
314-445-4715

Southwick, Christopher L AN
Columbia Anesthesia Assoc
1506 E. Broadway
Columbia, MO 65201
314-449-1207

Sowash, James J OBG
Boone Clinic 401 Keene St.
Columbia, MO 65201
314-874-3300

Spurgeon, Milo J AN
404 Edgewood Ave.
Columbia, MO 65203
314-442-2980

Stephenson, Hugh E TS
Department of Surgery
N323 Health Science Ctr
Columbia, MO 65212
314-882-7155

Stoy, Robt P GS
201 West Broadway
Columbia, MO 65203
314-449-3159

Stradford, H. Todd ORS
1444 S El Chaparral Ave
Columbia, MO 65201
314-443-4175

Struss, Andrea L P
3509 Monterey
Columbia, MO 65203
314-449-3131

Stuart, Byron M IM
910 Shamrock Terrace
Boonville, MO 65233
816-882-5679

Swaney, Charles M DR
1502 E. Broadway
Columbia, MO 65201
314-443-4591

Templer, Jerry W OTO
Division of Otolaryngology
MA314Health Science Ctr
Columbia, MO 65212
314-882-8173

Terry, Boyd E GS
Department of Surgery
N306 Health Science Ctr
Columbia, MO 65212
314-882-7156

Thomas, Horace E GS
503 Russell Blvd.
Columbia MO 65203
314-445-5219

Thomas, Robert M OTO
400 Keene St.
Columbia, MO 65201
314-449-0516

Tinsley, John C IM
104 S. Glenwood
Columbia, MO 65203
314-442-6450

Trammell, Lee W OBG
Women's Health Associates
201 West Broadway
Columbia, MO 65203
314-443-8796

Van Voorn, Catherine M IM
203 W. Broadway
Columbia, MO 65203
314-449-1227

Vogel, Curt M VS
3401 Berrywood
Columbia, MO 65201
314-443-8773

Waggoner, Chas M R
712 Hilltop Dr.
Columbia, MO 65201
314-449-5179

Wakerlin, Geo E US
231 El Bonito Way
Millbrae, CA 94030

Walls, Joseph T CDS
Department of Thoracic Surg
MA312Health Science Ctr
Columbia, MO 65212
314-882-6954

Walters, Laura D
1027 Hickory Hill Dr.
Columbia, MO 65203
314-449-1266

Watson, Trevor F GYN
1504 E Broadway
Columbia, MO 65201
314-443-4511

Watts, Clark NS
Department of Neurosurgery
N522 Health Science Ctr
Columbia, MO 65212
314-882-4908

*Weaver, Bruce E AN
1506 E. Broadway
P.O. Box 7041
Columbia, MO 65205
314-449-1207

Weaver, Dana J US
Department of Urology
N510 Health Science Ctr
Columbia, MO 65212
314-882-1151

Weaver, Mark E AN
Anesthesiologists, Inc.
P. O. Box 975
Columbia, MO 65205

Weigel, James W GP
1305 Fieldcrest
Columbia, MO 65203
314-445-3383

Weinstein, Stephen H US
Department of Urology
N510 Health Science Ctr
Columbia, MO 65212
314-882-1151

Weiss, James M P
Department of Psychiatry
C-6 Health Science Ctr
Columbia, MO 65212
314-882-3176

Welsh, Clinton F PS
UMHSC Div of Plastic Surgery
M349 One Hospital Dr.
Columbia, MO 65212
314-882-2275

Westgate, Steven J TR
1502 E. Broadway
Columbia, MO 65201
314-875-3349

Weston, Kenneth G FP
Family Health Care
1506 East Broadway
Columbia, MO 65201
314-449-0808

White, Harry H N
P. O. Box 716
Columbia, MO 65205
314-449-8115

Willcox, Roger A EM
12235 N. Cave Creed Rd.
#110-248
Phoenix, AZ 85022
314-675-3501

Williams, Fred OBG
201 W Broadway
Columbia, MO 65203
314-443-8796

Wilson, Geo P R
918 Westwinds Drive
Columbia, MO 65203
314-449-6254

Windmiller, M. Eugene GS
1502 E Broadway
Columbia, MO 65201
314-449-5684

Winkelmeyer, William K NEP
1701 E Broadway
Columbia, MO 65201
314-876-1735

Winn, Geo W GS
607 Poplar
Boonville, MO 65233
816-882-6218

Winnacker, John L IM
Department of Medicine
C326 VA Hospital
Columbia, MO 65201
314-443-2511

Witten, David M R
Rt 3
Columbia, MO 65203
314-882-8183

Worth, Eugene R AN
Univ of MO Dept of Anes
N314 HSC
Columbia, MO 65212
314-882-2568

Wright, William P IM
1305 English Drive
Columbia, MO 65203
314-862-6198

Xavier, Ravi AN
P.O.Box 975
Columbia, MO 65205
314-449-6280

Yang, H. Kell OPH
203 W. Broadway
Columbia, MO 65203
314-874-1616

Zacharias, Kulangara P GS
RR 11 Countryshire Box 331
Columbia, MO 65202
314-642-3311

Zurowski, Susan M D
Div of Derm M173 Health Sci
One Hospital Drive
Columbia, MO 65212
314-882-3141

027—BOONE-RESIDENT SEC.

Elwing, Terry J R
7421 Sunburst Ct.
Columbia, MO 65201
314-474-3390

Gold, Carl G GS
1101 Eastwood Circle
Columbia, MO 65201
314-449-1974

Nashelsky, Marcus B PTH
907 Broadhead St.
Columbia, MO 65203
314-442-4709

Slaughter, Larry FP
7550 S. Cavecreek Rd.
Columbia, MO 65201
314-449-2219

030—BUCHANAN

Acuff, Robert P R
5325 Faraon St.
St Joseph, MO 64506
816-271-6460

Ames, William H IM
2315 Lovers Lane
St. Joseph, MO 64506
816-232-6877

Andres, Edward H GS
1314 N. 36
St Joseph, MO 64506
816-233-3337

Balfour, H. Brian TR
Heartland Cancer Care Ctr
901 Robidoux
St. Joseph, MO 64501
816-271-7280

Ballard, Dewey P IM
5301 Faraon St.
St Joseph, MO 64506
816-233-9711

Bartulica, Nicholas P
3400 Frederick
St Joseph, MO 64502
816-232-8431

Beck, Paul M OPH
Kirkpatrick Building
St Joseph, MO 64501
816-233-2297

Beheler, Edward M GS
P. O. Box 758
St. Joseph, MO 64501
816-232-8444

Benson, Scott C FP
4626 East Carmel
Mesa, AZ 65806

Berkowitz, Ellis R IM
3715 Beck Rd. Bldg F
St. Joseph, MO 64506
816-279-6376

*Bowers, James L FP
1301 Buchanan Ave.
St. Joseph, MO 64501
816-232-4242

Bradley, J. Douglas FP
1314 N. 36
St. Joseph, MO 64506
816-233-7377

Brennan, Richard J ORS
5301 Faraon #210
St. Joseph, MO 64506
816-232-1888

Bristow, Robert B U
1610 Ashland
St. Joseph, MO 64506

*Bronfman, Jana R EM
NW MO Emergency Physicians
904 Edmond
St. Joseph, MO 65401
816-233-7955

Brown, Merlin D FP
1314 N 36
St Joseph, MO 64506
816-233-7377

Burnett, Dak R IM
5301 Faraon St.
St. Joseph, MO 64506
816-233-9711

Butler, Elza F OM
3110 Douglas St.
St Joseph, MO 64506
816-233-1656

Carpenter, Geo T IM
5301 Faraon St.
St Joseph, MO 64506
816-233-9711

Christ, Martin H A
1402 Faraon St
St Joseph, MO 64501
816-279-1615

Christiansen, Sidney G OTO
5301 Faraon St.
St. Joseph, MO 64506
816-364-3277

---

* Doctor of osteopathy.

Clark, Robert C IM
900 N. Belt
St. Joseph, MO 64506
816-233-9053
Conant, James F GP
702 Jules Street
P.O. Box 262
St. Joseph, MO 64502
816-232-4222
Conroy, James A P
Woodson Psychiatric Hospital
P. O. Box 263
St. Joseph, MO 64502
816-232-8431
Corder, Robt L OBG
1322 N. 36
St Joseph, MO 64506
816-233-5139
Cox, John P P
301 N 8th St.
St Joseph, MO 64501
816-232-2224
Craig, Richard O GS
2015 N. 36th
Beck Road Center
St Joseph, MO 64506
816-232-5113
Crie, J. Stanley IM
Heartland Cardiology Ctr
5325 Faraon
St. Joseph, MO 64506
816-279-6666
Day, Romney M U
1410 Highland
McAllen, TX 78501
Decanini, Mario P
P O Box 11
St Joseph, MO 64502
816-232-8431
DePriest, Michael D PS
P. O. Box 8337
St. Joseph, MO 64508
Douglass, Eric J AN
2400 Frederick Ave.
St. Joseph, MO 64506
816-232-3003
Dudik, Randall G GP
1301 S. Belt
St. Joseph, MO 64507
816-232-2525
Dunlap, Michael D EM
1701 Buckingham
St. Joseph, MO 64506
816-232-5913
DuMont, Clement C FP
1905 Francis St
St Joseph, MO 64501
816-232-5776
Dyer, Gary A D
1325 Village Dr
St Joseph, MO 64506
816-364-1507
Escobar, Nelson G NS
P. O. Box 445
St Joseph, MO 64502
816-232-9221
Fernandez, Fernando PD
1341 Village Dr
St Joseph, MO 64506
816-364-5974
Fisher, Jos L R
702 Jules St.
St Joseph, MO 64501
816-233-8211
Fleck, Janet M PTH
Pth Dept HHW 801 Faraon St.
St. Joseph, MO 64501
816-271-7697
Fox, Gerald E PTH
2106 Lovers Lane
St Joseph, MO 64505
816-232-7330
Gaffney, Jon W PS
1005 "B" West St Maartens Dr
St. Joseph, MO 64506
816-364-3113
Garrison, David L OBG
1502 N. 36th
St Joseph, MO 64506
816-232-0654
Goeking, C Keith OBG
1502 N. 36th Street
St. Joseph, MO 64506
816-232-0654
Gondring, William H ORS
1335 Village Dr
St Joseph, MO 64506
816-233-0211
Grant, William M AN
511 Francis
P. O. Box 1368
St. Joseph, MO 64502
816-232-3003
Grewal, Narinder S AN
2400 Frederick Ave.
St. Joseph, MO 64506
816-232-3003
Grimes, Manning E FP
815 N. Noyes Blvd
St Joseph, MO 64506
816-232-5527
Gunter, Joe S U
1322 N 36th Street
St Joseph, MO 64506
816-232-6315
Harner, Casper G D
904 Edmond St
St Joseph, MO 64501
816-233-7702
Hayes, Paul W P
610 N Noyes Blvd
St Joseph, MO 64506
816-233-4950
Heins, Donald E R
617 Tanglewood
St. Joseph, MO 64506
816-271-7557
Herman, Allen I IM
1909 N 32nd Street
St Joseph, MO 64506
816-232-4056
Hindupur, Mohan R CD
1417 Village Drive
St. Joseph, MO 64506
Hughes, Judson M OM
3306 Jennifer Lane
St Joseph, MO 64506
816-279-3823
Ide, Lucien W IM
1416 N. 25th
St Joseph, MO 64506
816-279-9990
Inocencio, Eddie C OTO
1419 Village Dr.
St Joseph, MO 64506
816-232-0053
*Jacks, Richard K P
P. O. Box 263
St. Joseph, MO 64502
816-232-8431
Jarvis, Stephen P P
1802 Union St. Square
St. Joseph, MO 64501
816-364-2021
Kanmanthreddy, Vijaya P
1009 W. St. Maartens Ste A
St. Joseph, MO 64506
816-233-2299
Kelty, Maureen A OBG
1502 N. 36th
St. Joseph, MO 64506
816-232-0654
Kiekhaefer, Theodore C FP
1301 S. Belt
St. Joseph, MO 64507
816-232-2525
Kline, Carlyn M FP
17 Stonecrest
St Joseph, MO 64506
816-279-3506
Kline, Edmund W OBG
1322 N 36
St Joseph, MO 64506
816-233-5139
Knepper, Paul A III GS
902 Edmond
St Joseph, MO 64501
816-364-2588
LacKamp, Robert J R
702 Jule St.
St. Joseph, MO 64501
816-233-8211
Laningham, Susan L IM
5301 Faraon St.
St. Joseph, MO 64506
816-233-9711
Lehman, Philip C ORS
8718 Enterprise Ave NE Bay 7
Tuscaloosa, AL 35406
816-232-9740
Lockard, Orlyn O IM
3921 Sherman
St. Joseph, MO 64506
816-233-8724
Makos, Mignon M N
510 Francis
St. Joseph, MO 64501
Marston, F. James OBG
1502 North 36th St.
St Joseph, MO 64506
816-232-0654
Martin, John N U
#9 Lindenwood
St Joseph, MO 64505
816-233-3215
Maxwell, Sarz P
114 E. S. Hills Dr.
Maryville, MO 64468
816-582-3139
McDaniel, John R GS
1808 N 29th St.
St Joseph, MO 64507
816-279-7206
McDonald, Wallace IM
29 Ridgeland Road
St Joseph, MO 64505
816-233-9027
McDonald, Wilbur P GS
6 Country Club Road
St Joseph, MO 64505
816-232-1719
*McLaughlin, Dan A AN
2400 Frederick
St. Joseph, MO 64506
816-232-3003
McMillen, James J IM
900 N Belt Highway
St Joseph, MO 64506
816-233-9053
*Mears, Gregory H FP
P. O. Box 96 103 W. Main
Highland, KS 66035
913-442-3213
Miller, William D FP
1314 N. 36th
St. Joseph, MO 64506
816-233-7377
Moeller, Randall J U
1322 N 36th Street
St. Joseph, MO 64506
816-232-6315
Moranville, Benedict A EM
4814 Stonecrest Terrace
St. Joseph, MO 64506
816-271-7111
Mothershead, John L FP
2605 Frederick Ave
St. Joseph, MO 64506
816-233-1212
Moya, Carlos E PTH
Heartland Hospital West
Seventh Street
St. Joseph, MO 64501
816-271-7901
Mulder, George D GS
1314 North 36th St.
St. Joseph, MO 64501
816-233-3337
Mullican, Chas N IM
3715 Beck Rd. Bldg F.
St Joseph, MO 64506
816-279-6376
Murphy, James A OPH
3201 Ashland Ave.
St Joseph, MO 64506
816-279-3937
Nguyen, Helen T A
P. O. Box 8294
St. Joseph, MO 64508
816-279-1113
Partamian, Krikor O U
1322 N 36th
St Joseph, MO 64506
816-232-6315
Patel, Bipin T AN
2400 Frederick Suite 111A
St. Joseph, MO 64506
816-232-3003
Patel, Prakesh B IM
1011 A St. Maartens Dr.
(Wyeth Estate)
St. Joseph, MO 64506
816-232-0185
Patel, Raman J EM
513 Southwood Lane
St. Joseph, MO 64506
816-233-7955
Paulson, Gordon S IM
1820 Ashland Avenue
St Joseph, MO 64506
816-233-1361
Pifer, Lawrence H FP
925 Fifth Ave
St Joseph, MO 64505
816-232-1333
Potter, Caryl A Jr IM
2320 Northeast Parkway
St. Joseph, MO 64506
816-232-4934
Prokop, Jos R PD
29 Stonecrest
St Joseph, MO 64506
816-232-4100
Rangineni, Rajagopal IM
3918 Sherman Ave.
St. Joseph, MO 64506
816-232-0645
Raphel, Jose P
1111 N 49th Terr
St Joseph, MO 64506
816-232-8431
Redmond, William S FP
3102 Jules
St. Joseph, MO 64501
Reese, Jeffrey C GS
2015 No. 36th St.
St. Joseph, MO 64506
816-232-5113
Remis, Robert E U
1322 North 36th
St. Joseph, MO 64506
816-232-6315

---

* Doctor of osteopathy.

Rippe, William F IM
5301 Faraon St.
St. Joseph, MO 64506
816-233-9711
Roberts, Phyllis G PD
1429 Village Drive
St Joseph, MO 64506
816-233-5491
Rogers, John T GS
2505 N. 29
St Joseph, MO 64506
816-279-2208
Rosenthal, Irwin I FP
422 Felix St. Apt 611
St. Joseph, MO 64501
816-279-4443
Sabahi, Houman DR
5325 Faraon St.
St. Joseph, MO 64501
816-271-6460
Sandberg, Chris B FP
1314 North 36th St.
St. Joseph, MO 64506
816-233-7377
Schaaf, Robert O
313 South 169 Highway
Gower, MO 64454
816-424-6471
Sealby, Robert L FP
904 Edmond St.
St. Joseph, MO 64501
816-233-7702
Shah, Narendra AN
2400 Frederick Suite 111
St Joseph, MO 64506
816-232-3003
Shah, Sheila PTH
Heartland Hospital West
St. Joseph, MO 64501
816-271-7901

Shevlin, Chas F PD
1635C La Reina Way
Palm Springs, CA 92262
Silliman, York E PTH
2715 Francis
St Joseph, MO 64501
816-271-6100
Sklenar, Donald E FP
228 Illinois
St. Joseph, MO 64504
816-238-4016
Smith, Bruce D ORS
1335 Village Dr.
St. Joseph, MO 64506
816-233-0211
*Smith, Cyrus D ORS
3107 Frederick
St. Joseph, MO 64506
816-233-9888
Sourk, Robert L IM
900 N Belt
St. Joseph, MO 64506
816-233-9053
Sprague, Gita IM
5301 Faraon
St. Joseph, MO 64506
Spurgat, Robert M IM
3715 Beck Rd. Bldg F
St. Joseph, MO 64506
816-279-6376
Stallard, Donald J IM
5301 Faraon
St Joseph, MO 64506
816-233-9711
Stevens, Edward M DR
Heartland Hospital West
St Joseph, MO 64501
816-271-7557
Stuber, Robert R IM
900 N Belt Hwy
St Joseph, MO 64506
816-233-9053
Taege, Alan J IM
5301 Faraon
St. Joseph, MO 64506
816-233-9711
Thompson, F Gregg PD
2714 Ashland Ave
St Joseph, MO 64506
816-364-5974
Tobin, Robert F OPH
1407 Village Dr.
St Joseph, MO 64506
816-279-1363
Valera, Salvador S P
4110 W. Haverill
St. Joseph, MO 64506
816-233-8431

Wadlow, Ernest E OBG
1401 N. 43rd St.
St. Joseph, MO 64506
Waggoner, Sharon E FP
301 Illinois
St. Joseph, MO 64504
816-238-4544

Walsh, Richard J D
3917 Sherman
St. Joseph, MO 64506
816-364-6777
Watts, Larry K OBG
1322 N. 36th St.
St. Joseph, MO 64506
Weinand, Ernest E GS
1314 N. 36th St.
St Joseph, MO 64506
816-233-3337
Whitehead, Clay C P
5301 Faraon #110
St. Joseph, MO 64506
816-271-6570
Whitsell, O. Earl OPH
2306 Sacramento
St Joseph, MO 64507
816-279-2363
*Williams, Robert J P
P. O. Box 8006
St. Joseph, MO 64508
816-232-8431
Willman, Charles R GS
2216 Highly
St Joseph, MO 64506
816-232-4447
Willumsen, Henry C OBG
627 North 25th St. Apt. 208
St Joseph, MO 64506
816-232-7172
Windsor, David G P
RR 1
Rosendale, MO 64483
816-232-5246
Woehl, Joseph J N
3920 Sherman
St. Joseph, MO 64506
816-756-0997
Wolanski, Eugene G IM
5301 Faraon
St Joseph, MO 64506
816-233-9711
Young, Thomas J OPH
3201 Ashland Ave
St Joseph, MO 64506
816-279-3937

034—B-W-R-C

Aldridge, George A U
1901 Sunset
Poplar Bluff, MO 63901
314-686-4139
Andrus, Don L GS
VA Hospital
Poplar Bluff, MO 63901
314-686-4151
Barbour, Marvin R FP
Kneibert Clinic
Poplar Bluff, MO 63901
314-686-2411
Baskurt, Mehmet V R
VA Hospital Dept of Rad
Poplar Bluff, MO 63901
314-686-4151
Bauman, Mark A IM
686 Lester
Poplar Bluff, MO 63901
314-686-2411
Benoist, Louis A ORS
2509 Lucy Lee Parkway
Poplar Bluff, MO 63901
314-785-0133
Bhothinard, Bhisit N
P. O. Box 4027
Poplar Bluff, MO 63901
314-686-1135
Biggs, Fred J GP
5612 Bobby Jones Rt 4
Harlingen, TX 78550
314-785-4515
Brookreson, Alton D FP
1901 Sunset Drive
Poplar Bluff, MO 63901
314-686-4133
Caldwell, Fred FP
1901 Sunset Drive
Poplar Bluff, MO 63901
314-785-0828
Camp, Richard V FP
P.O. Box 158
Poplar Bluff, MO 63901
Chand, Nazar PD
666 Lester
Poplar Bluff, MO 63901
314-686-2411
Christy, John P GS
666 Lester St
Poplar Bluff, MO 63901
314-686-2411
Chung, T. David GS
930 N. Westwood Blvd.
Poplar Bluff, MO 63901
314-686-6061

Costin, Jimmy L PTH
P.O. Box 4175
Poplar Bluff, MO 63901
314-686-2488

Dennison, Bruce F OTO
2503 Lucy Lee Parkway
Poplar Bluff, MO 63901
314-785-5544
Dever, Robert L DR
P.O.Box 3932
Poplar Bluff, MO 63901
314-785-7721
Dye, Derry D Jr. PD
686 Lester
Poplar Bluff, MO 63901
314-686-2411
Elliott, Wendell H FP
Kneibert Clinic
686 Lester
Poplar Bluff, MO 63901
314-686-2411
Engelhardt, Robt C AN
Kneibert Clinic
Poplar Bluff, MO 63901
314-686-2411
Fraser, Richard A IM
Kneibert Clinic Bldg
686 Lester St.
Poplar Bluff, MO 63901
314-686-2411
*Gayle, David R GP
415 S. Main
Piedmont, MO 63957
314-223-4233
*Gayle, Richard E GP
415 S. Main
Piedmont, MO 63957
314-223-4233
Gernstetter, S L ORS
P O Box 337
Poplar Bluff, MO 63901
314-785-2243
Gieselmann, James W GS
1901 Sunset
Poplar Bluff, MO 63901
314-686-2446
Gujarati, Subhash B R
Lucy Lee Hospital
Poplar Bluff, MO 63901
314-785-6380

Hansbrough, Eugene C ORS
Kneibert Clinic
686 Lester
Poplar Bluff, MO 63901
314-686-2411

Hansbrough, Eugene T GS
1502 Lurlyn
Poplar Bluff, MO 63901
314-686-2411

Hecker, Jos E FP
Kneibert Clinic
Poplar Bluff, MO 63901
314-686-2411

Hoja, W Alex OBG
1901 Sunset
Northwest Medical Ctr
Poplar Bluff, MO 63901
314-785-7731

Hunt, John L GP
3600 Wilcox Rd.
Poplar Bluff, MO 63901
314-222-3556
Kim, Chul IM
1919 Big Bend Road
P.O. Box 3908
Poplar Bluff, MO 63901
314-686-7223
Laatsch, Robt H FP
1333 Meadow Ln
Poplar Bluff, MO 63901
314-686-6041
Leroux, Gene H FP
204 Summit
Doniphan, MO 63935
314-996-2136
Levenson, Ernest OPH
1901 Sunset Drive
Poplar Bluff, MO 63901
314-646-2666
Levenson, Ina D
1901 Sunset
Poplar Bluff, MO 63901
314-646-2666
Loughead, John P OTO
1201 Lurlyn Ave
Poplar Bluff, MO 63901
Madduri, Aruna D OBG
666 Lester
Poplar Bluff, MO 63901
314-686-2411
Madduri, Sivaprasad D U
666 Lester
Poplar Bluff, MO 63901
314-686-2411
May, Albert L GS
445 N 11th St.
Poplar Bluff, MO 63901
314-686-6041
McGath, Rickey L FP
P. O. Box 220
686 Lester
Poplar Bluff, MO 63901
314-686-2411

• Doctor of osteopathy.

Moranz, John W Jct.D,Hwy 60 Van Buren, MO 63965 314-323-4211	ENT
Nagy, Al L Rt. 1 Box 108 Poplar Bluff, MO 63901 314-785-7941	P
Parker, Arthur C 5232 Beach Dr. E. Gulf Pines Destin, FL 32541 314-686-2411	PD
Patty, Carl F 1901 Sunset Poplar Bluff, MO 63901 314-686-4133	OBG
Phanijphand, Suwan 2011 Northwestwood Poplar Bluff, MO 63901 314-785-7791	OTO
Ponder, Terry B 10 Oak Tree Village Doniphan, MO 63935 314-996-7771	FP
Ramirez, Ricardo M Freibert Clinic Poplar Bluff, MO 63901 314-686-2411	PTH
Reddy, Abbiah N 666 Lester St Poplar Bluff, MO 63901 314-686-2411	U
Robertson, Wm D McPheeters Clinic 107 Oak St. Poplar Bluff, MO 63901 314-666-6041	GP
Ruff, T E 1411 Rosedale Poplar Bluff, MO 63901 314-785-4916	U
Samuel, George P #1 Hospital Dr. Doniphan, MO 63935 314-996-7148	IM
Suvan, R 2501 Lucy Lee Parkway Poplar Bluff, MO 63901 314-686-6041	PD
Till, Bennie N 666 Lester St Poplar Bluff, MO 63901 314-686-2411	FP
Traxel, Wm. L 623 Pine Blvd Poplar Bluff, MO 63901 314-686-2411	OPH
Turner, Kirby L 686 Lester St. Poplar Bluff, MO 63901 314-686-2411	FP
Varma, Devendra K 1381 Susan Dr. Poplar Bluff, MO 63901 314-785-7708	IM
White, Barry B Puxico Clinic MD Inc Puxico, MO 63960 314-222-3556	FP
Wood, Thos O 2008 Schweitzer Poplar Bluff, MO 63901 314-686-2411	FP

038—CALLAWAY

Benitez, Jose A 20 South Hospital Drive Fulton, MO 65251 314-642-1725	OBG
Brown, Katherine S 1304 Vine St Fulton, MO 65251	AN
Cooper, Thomas J 820 Jefferson Fulton, MO 65251 314-642-6691	FP
Cravens, William P 820 Jefferson Fulton, MO 65251 314-642-6691	FP
Gish, E R 5 E 5th St Fulton, MO 65251 314-642-5350	GP
Groce, Geo D 820 Jefferson St Fulton, MO 65251 314-642-6691	FP
Ivins, Gregory K 26 South Hospital Drive Fulton, MO 65251 314-642-0115	GS
Jackson, Vernon B 206 E. 9th St. Fulton, MO 65251 314-642-3311	OPH
Nichols, David A 22 South Hospital Drive Fulton, MO 65251 314-642-1295	IM
Osbourn, Richard A 3 Gross Place Fulton, MO 65251 314-642-6621	FP
Parulekar, Dilip G P. O. Box 884 Fulton, MO 65251 314-642-8505	GS
Spencer, Donald C 614 Market St. Fulton, MO 65251 314-642-5911	FP

042—CAPE GIRARDEAU

Adams, Riley R P.O. Box 751 721 N. Sunset Blvd. Cape Girardeau, MO 63701 314-335-0185	AN
*Asher, Kennett D 545 Broadridge Rd. Jackson, MO 63755 314-243-8408	FP
Aydt, Sarah A #14 Doctors Park Cape Girardeau, MO 63701 314-334-9641	IM
Bahn, Charles F 235 Long Branch East Prescott, AZ 86303	GE
Bassett, Gary L P. O. Box 779 35 Doctors Park Cape Girardeau, MO 63701 314-334-2570	P
Blankenship, Dale M 2 Coggeshall Ct. Savannah, GA 31411	FP
Bowman, W. Kirk 14 Doctors Park Cape Girardeau, MO 63701 314-334-9641	CD
Braxton, Frank W 14 Doctor's Park Cape Girardeau, MO 63701 314-334-9641	NEP
Brown, Mike J 4 DuMaine Cape Girardeau, MO 63701 314-335-6671	DR
Burcham, Tom R P. O. Box 868 Farmington, MO 63640 314-335-1251	FP
Burford, Edwin K 2424 Terry Hill Cape Girardeau, MO 63701 314-335-1251	FP
Campbell, Edward D 1100 N. Henderson Cape Girardeau, MO 63701 314-335-8725	CRS
Campbell, William S Jr 36 Doctors' Park Cape Girardeau, MO 63701	R
Catron, David C 60 Doctors' Park Cape Girardeau, MO 63701 314-624-5911	FP
Chapman, James B 25 Doctors Park Cape Girardeau, MO 63701 314-334-6008	CD
Chapman, Jean A 35 Doctors Park Cape Girardeau, MO 63701 314-335-1218	A
Chaudhari, A. Basit 66 Doctors Park Cape Girardeau, MO 63701	NS
Clark, David J Surgical Clinic 10 Doctors Park Cape Girardeau, MO 63701 314-334-3074	GS
Coleman, Matthew J 21 Doctors Park Cape Girardeau, MO 63701	IM
Coulson, Forest H Route 1, Box 154 Whitewater, MO 63785 314-243-8677	IM
Cozean, Charles H 56 Doctors Park Cape Girardeau, MO 63701 314-334-4401	OPH
Crist, Charles L #60 Doctors' Park Cape Girardeau, MO 63701	FP
Cundiff, H. Clay 64 Doctors Park Cape Girardeau, MO 63701 314-334-5265	OPH
Cupples, Tommy E c/o Cape Radiology Group,Inc P.O. Box 1330 Cape Girardeau, MO 63701 314-335-6671	DR
DeFelice, Charles E 14 Doctors Park Cape Girardeau, MO 63701 314-334-9641	IM
Dinkins, James A 23 Doctors Park Cape Girardeau, MO 63701 314-334-7796	PD
Downey, Jon P 60 Doctors Park Cape Girardeau, MO 63701 314-334-1123	FP
Dzur, James R 53 Doctors Park Cape Girardeau, MO 63701 314-334-2495	IM
Eller, Gordon W 48 Doctors Park Cape Girardeau, MO 63701 314-335-8257	OPS
Essmyer, Joseph K P. O. Box 877 Cape Girardeau, MO 63701 314-335-3070	AN
Felker, J. Russell 3 Doctors Park Cape Girardeau, MO 63701 314-334-7748	U
Foley, Jonathon K 10 Doctors Park Cape Girardeau, MO 63701 314-334-3074	CDS
Freeman, Michael R 21 Doctors Park Cape Girardeau, MO 63701 314-334-8870	IM
Gile, Robert J #37 Doctors' Park P. O. Box 877 Cape Girardeau, MO 63701	AN
Glenn, Theodore J 53 Doctors Park Cape Girardeau, MO 63701 314-335-7899	P
Grable, James D 30 Doctors' Park Cape Girardeau, MO 63701 314-379-5232	GP
Griffith, S Kent 63 Doctors Park Cape Girardeau, MO 63701 314-334-4766	FP
*Hall, John P 3 Doctors Park Cape Girardeau, MO 63701 314-334-7748	U
Haycraft, Gordon L 14 Doctors Park Cape Girardeau, MO 63701 314-334-9641	CD
Higgins, Michael G P. O. Box 1330 Cape Girardeau, MO 63701	R
*Hoffman, James E 23 Doctors Park Cape Girardeau, MO 63701 314-334-7796	PD
Holcomb, John K 60 Doctors Park Cape Girardeau, MO 63701 314-334-1123	FP
Honaas, Tryove O #68 Doctors' Park Cape Girardeau, MO 63701 314-334-2801	GE
Horn, Paul C 36 1 Doctors Park Cape Girardeau, MO 63701 314-334-2886	PTH
Hosler, Mark W 1701 Lacey SEMO Hospital Cape Girardeau, MO 63701 314-651-5539	PTH
Hunt, Robert S 10 Doctors Park Cape Girardeau, MO 63701 314-334-3074	GS
Icaza, Ramiro 2130 Highway 61E Jackson, MO 63755 314-243-3115	FP
Jaeger, Jos N 938 Shady Lane Jackson, MO 63755 314-243-2343	GP
Jedlinski, Michael T #14 Doctors Park Cape Girardeau, MO 63701 314-334-9641	IM

---

* Doctor of osteopathy.

Johnson, E C III   R
P. O. Box 1330
Cape Girardeau, MO 63701
314-335-6671
Johnson, Earl W   R
P. O. Box 1330
1044 N. Henderson
Cape Girardeau, MO 63701
314-334-2027
Jung, Christopher H   OTO
1 Doctors Park
Cape Girardeau, MO 63701
314-334-7173
Jung, J. Marshall   OPH
64 Doctors Park
Cape Girardeau, MO 63701
314-334-5265
Kamath, K.P.S.   P
815 Independence
Cape Girardeau, MO 63701
314-334-4002
Kasten, Mark C   FP
63 Doctors Park
Cape Girardeau, MO 63701
314-334-4766
Kasten, Melvin C   GS
10 Doctors Park
Cape Girardeau, MO 63701
314-334-3074

Khan, Khalid I   PUD
937 Broadway
Cape Girardeau, MO 63701
314-335-5359
Kies, Richard L   OPH
1819 Broadway St.
Cape Girardeau, MO 63701
314-335-9175
Kim, Yong Kie   NS
3004 Gordonville Rd.
Cape Girardeau, MO 63701
314-651-3188
Kinder, James A   PD
1435 Mt Auburn Road
Cape Girardeau, MO 63701
314-334-3300
Kinder, Jerry L   GS
10 Doctors Park
Cape Girardeau, MO 63701
314-334-3074
Kouo, Louis   IM
68 Doctors Park
Cape Girardeau, MO 63701
314-334-0341
Kratz, Paul F   GYN
2560 Independence
Cape Girardeau, MO 63701
314-334-5700
LaFoe, William K   CD
25 Doctors Park
Cape Girardeau, MO 63701
314-334-6008
Lee, David Y S   N
3004 Gordonville Rd.
Cape Girardeau, MO 63701
314-651-3188
Lee, Wilfred   GE
21 Doctors' Park
Cape Girardeau, MO 63701
Lovinggood, Thos A   PTH
2505 Allendale
Cape Girardeau, MO 63701
314-651-5539
Lyskowski, Maria M   P
3004 Gordonville
Cape Girardeau, MO 63701
314-651-3188
Mangurta, Vijaya K   P
215 West Main St.
Jackson, MO 63755
314-243-8157
Marietta, William G   CD
937 Broadway
Cape Girardeau, MO 63701
314-334-9127

Martin, Richard A   OTO
17 Doctors Park
Cape Girardeau, MO 63701
314-335-4448
Masters, Edwin J   FP
60 Doctors' Park
Cape Girardeau, MO 63701
314-471-0330
McDonald, Eugene F   GP
930 Jackson Trail
Jackson, MO 63755
314-243-2322
McGinty, Chas P   GS
35 Doctors' Park
Cape Girardeau, MO 63701
314-335-2663
McGinty, Frank H   GS
#35 Doctors' Park
Cape Girardeau, MO 63701
McIntosh, Douglas A   EM
Rt.3 Box 241A
Jackson, MO 63755
314-334-4822

*Mellies, Steven D   N
3004 Gordonville Road
Cape Girardeau, MO 63701
314-651-3188
Moore, Richard E   AN
P. O. Box 751
Cape Girardeau, MO 63701
314-335-0185
Morgan, Dix R   TR
Radiation/Oncology SEMO Hosp
1701 Lacey
Cape Girardeau, MO 63701
314-651-5544
Oehler, William F   GP
1001 N. Henderson
Cape Girardeau, MO 63701
Otto, Thomas G   ORS
48 Doctors Park
Cape Girardeau, MO 63701
314-335-8257
Palen, James E   FP
15 Doctors Park
Cape Girardeau, MO 63701
314-335-0166
Pancoast, Charles H   EM
St. Francis Medical Center
211 St. Francis Dr.
Cape Girardeau, MO 63701
Parsons, D L   FP
60 Doctors Park
Cape Girardeau, MO 63701
314-334-1123

Perry, Robert E   IM
60 Doctors Park
Cape Girardeau, MO 63701
314-651-4443
*Pewitt, Charles S   GP
545 Broadridge Rd.
Jackson, MO 63755
314-243-8408
*Pfautsch, Mark L   R
P. O. Box 969
Cape Girardeau, MO 63701
Porter, Lynn W   AN
P. O. Box 877
Cape Girardeau, MO 63701
314-335-3070
Pringle, Scot G   OBG
55 Doctors Park
Cape Girardeau, MO 63701
314-334-5249
Pyeatte, Jacob P Jr.   OBG
55 Doctors' Park
Cape Girardeau, MO 63701
Ramsey, J. Darryl   TS
1834 Broadway
Cape Girardeau, MO 63701
314-334-5070
*Ramsey, Jesse R   PD
1435 Mount Auburn Rd.
Cape Girardeau, MO 63701
314-335-8006
Rawlins, Fred E   OBG
213 N. Sprigg
Cape Girardeau, MO 63701
314-334-5056
Reddy, R. Ramachandra   PS
35 Doctors Park
Cape Girardeau, MO 63701
314-651-4150
Reimer, Donald R   AN
Rt 4, Box 64
Jackson, MO 63755
314-243-4025
Ridings, G R   TR
937 Broadway
Cape Girardeau, MO 63701
Ridings, Harold D   IM
937 Broadway
Cape Girardeau, MO 63701
Ringer, C. Nelson   OPH
#64 Doctors Park
Cape Girardeau, MO 63701
314-334-5265
Ritter, C J   IM
14 Doctors Park
Cape Girardeau, MO 63701
314-334-9641
Ritter, Carl F   R
P. O. Box 1330
Cape Girardeau, MO 63701
314-335-6671
Ritter, Ray A Jr   ORS
48 Doctors Park
Cape Girardeau, MO 63701
314-335-8257
Ritter, Raymond A Sr.   ORS
727 Bellevue #3D
Cape Girardeau, MO 63701
314-335-5825
Roberts, Perry T   OTO
P.O. Box 1429
8 Doctors Park
Cape Girardeau, MO 63701
314-334-7718
Robinson, Ronald L   IM
61 Doctors Park
Cape Girardeau, MO 63701
314-335-0174

Rohatgi, Reeta   P
24 S. Mt. Auburn Rd.
Cape Girardeau, MO 63701
314-334-1100
Ruess, Robert W   TS
1834 Broadway
Cape Girardeau, MO 63701
314-334-5070
*Russell, Robert B   AN
P. O. Box 751
721 N Sunset Blvd.
Cape Girardeau, MO 63702
314-335-0185
*Sacha, Robert F   A
8 Doctors Park
Cape Girardeau, MO 63701
314-335-1969
*Schroeder, Walter A Jr.   OTO
35 Doctors Park
Cape Girardeau, MO 63701
314-334-5007
Seabaugh, Wm L   GS
Rt. 2, Box 563
24 N. Sprigg
Cape Girardeau, MO 63701
314-334-4471
Shakil, Mohammad   N
66 Doctors Park
Cape Girardeau, MO 63701
314-334-7175
Shoss, Milton   R
1 Oyster Catcher
Hilton Head Isl, SC 29928
Sides, Stanley D   IM
14 Doctors Park
Cape Girardeau, MO 63701
314-334-9641

Smithson, Debra S   FP
63 Doctors Park
Cape Girardeau, MO 63701
314-334-4766
Sparkman, Thomas C   FP
15 Doctors Park
Cape Girardeau, MO 63701
314-334-6053
Spence, Paul A   FP
60 Doctors Park
Cape Girardeau, MO 63701
314-334-1123
Spitler, Allen L   CD
25 Doctors Park
Cape Girardeau, MO 63701
314-334-6008
*Stahly, Randall L   N
5 Doctors Park
Cape Girardeau, MO 63701
Stahr, William D   PTH
36-1 Doctors Park
Cape Girardeau, MO 63701
314-334-2886
Stoecker, Willeford J   DR
P.O. Box 1330
Cape Girardeau, MO 63701
314-335-6671
Talbert, Clifford R   CD
25 Doctors Park
Cape Girardeau, MO 63701
314-334-6008
Taylor, Philip W   RHU
14 Doctors Park
Cape Girardeau, MO 63701
314-334-9641
*Tedrick, Phillip D   EM
St. Francis Medical Center
211 St. Francis Drive
Cape Girardeau, MO 63701
Terry, James W   U
3 Doctors Park
Cape Girardeau, MO 63701
314-334-7748
*Tewis, Huey D   AN
P. O. Box 751
721 N. Sunset Blvd.
Cape Girardeau, MO 63702
314-335-0185
Thompson, Paul D   U
#3 Doctors' Park
Cape Girardeau, MO 63701
Thorpe, William P   ORS
48 Doctors Park
Cape Girardeau, MO 63701
314-335-8257

Tobin, Gregory A   PS
5 Doctors Park
Cape Girardeau, MO 63701
Trantham, David M   EM
St. Francis Med. Ctr.
211 St. Francis Dr.
Cape Girardeau, MO 63701
314-335-1251
Trueblood, Michael C   ORS
48 Doctors Park
Cape Girardeau, MO 63701
314-335-8257
Velander, Robert D   EM
1803 Northbridge Drive
Cape Girardeau, MO 63701
314-334-4822

---

*Doctor of osteopathy.

Weber-Bornstein, Nancy EM
1701 Lacey St.
Southeast Mo Hospital
Cape Girardeau, MO 63701

Westcott, Bruce R AN
P. O. Box 877
Cape Girardeau, MO 63701
314-335-3070

Whitten, J S OBG
55 Doctors Park
Cape Girardeau, MO 63701
314-334-5249

Whittenberger, Brock P HEM
14 Doctors Park
Cape Girardeau, MO 63701
314-334-9641

Williams, Craig W R
Shoss Radiology Group
POBox 1330 937 Broadway
Cape Girardeau, MO 63701
314-335-6671

Wilson, Chas F IM
1530 Oak Lei Dr.
Cape Girardeau, MO 63701
314-335-8477

Wulfers, Michael C FP
Medical Arts Building
937 Broadway
Cape Girardeau, MO 63701
314-334-4424

Yates, Karen OTO
1 Doctors Park
Cape Girardeau, MO 63701
314-335-5120

Zoffuto, Anthony C IM
14 Doctors Park
Cape Girardeau, MO 63701
314-334-9641

046—C-M-M-R

Ahad, Khandaker A OPH
643 N. Morley St.
Moberly, MO 65270
816-263-5363

Bade, Bruce IM
1513 Union Ave.
Suite 1600
Moberly, MO 65270
816-263-4040

Baker, Josephine D AN
614 Fisk St
Moberly, MO 65270
816-263-5267

Barnett, Floyd A GP
111 E Monroe St
Paris, MO 65275
816-327-4214

Bautista, Rogelio L GS
324 Circle Dr
Moberly, MO 65270
816-263-2650

Campbell, James E GP
1101 Jackson St
Macon, MO 63552
816-385-3141

Cohrs, Clarence C A
2 Flower Lane Terrace
Moberly, MO 65270
816-263-1747

Dalgleish, Frederick A OBG
1513 Union Ave.
Moberly Prof Arts Bldg.
Moberly, MO 65270
816-263-3600

Dasovich, Judith A IM
1613 Union Ave.
Moberly, MO 65270
314-882-8091

Dreyer, Philip V GP
208 Short St
Huntsville, MO 65259
816-277-4202

Duff, John A IM
1513 Union Ave.
Moberly, MO 65270
314-882-8090

Edwards, Charles F PD
1145 South Morley
Moberly, MO 65270

Eggleston, Donald E GP
8721 Alhambra
Prairie Village, KS 66207

Fleming, David A IM
1513 Union St.
Moberly, MO 65270
816-263-4040

Fleming, J. Will Jr IM
1513 Union Ave.
Moberly, MO 65270
816-263-4040

Harms, Lawrence L OBG
6983 Bluewater Trail
St. Louis, MO 63123
816-263-3600

Huber, Lasley E GP
223 N Williams
Moberly, MO 65270

Kays, Kenneth M R
1729 Lakewood Dr.
Moberly, MO 65270
314-443-4591

Kleopfer, Lynn L PTH
Moberly Regional Med Ctr
P. O. Box 3000
Moberly, MO 65270
816-263-8400

Lamonda, Gary W IM
1513 Union Ave.
Moberly Prof Arts Bldg
Moberly, MO 65270
816-263-4040

Lin, C H OBG
1513 Union
Moberly, MO 65270
816-263-7087

Lin, H T IM
1313 Union Ave. Suite 1200
Moberly Prof. Arts Bldg
Moberly, MO 65270
816-263-1340

Mengel, Charles E IM
1513 Union Ave.
Moberly, MO 65270
816-263-4040

Miller, D H P
8555 S Lewis
Apt 201
Tulsa, OK 74137

Stuart, Danl D GP
313 N. Small Rt 1 Box 93
Brunswick, MO 65236
816-548-3566

Tompson, Robt V GS
712 Gilman Rd.
Moberly, MO 65270
816-263-6045

Turnbaugh, Thomas R ORS
1513 Union Ave.
Moberly, MO 65270
816-263-6494

050—CLAY-PLATTE

Albani, Frank J U
34 Westwoods Dr.
Liberty, MO 64068
816-781-8400

Albani, Lawrence A U
2700 Hospital Drive Ste 320
No Kansas City, MO 64116
816-842-0171

Allain, James J OPH
4308 W. 83rd St.
Prairie Village, KS 66208

Allan, James R GP
1000 North Jesse James
Ste. 3
Excelsior Spgs, MO 64024
816-637-3123

Allen, Louis A PTH
6501 E. Commerce Ave. #101
Kansas City, MO 64120
816-474-5656

Armstrong, Jay H R
4812 Black Swan Dr
Shawnee Mission, KS 66216
913-631-2867

Arst, Herbert E IM
1201 NE 81st Street
Kansas City, MO 64118
816-436-4489

Balhuizen, John PUD
2920 N.E. 60th St.
Kansas City, MO 64119
816-452-7557

Bashford, Eileen A AN
2700 Rockcreek Parkway #306
NO Kansas City, MO 64111
816-221-5050

Bates, G. Comer CD
102 E 43rd Street
Kansas City, MO 64116

Beggs, Charles W GS
Westowne III,
Liberty, MO 64068
816-781-3515

Benson, Larry E IM
2700 Hospital Dr Ste 240
No. Kansas City, MO 64116
816-744-9353

Boone, Daniel C OM
5800 North Grand
Kansas City, MO 64118
816-453-4069

Bowles, Richard P FP
140 Westwood Dr.
Liberty, MO 64068
816-781-4740

Bowser, Robert L AN
2400 R.D. Mize Rd. Suite 1
Independence, MO 64057

Breckenridge, Robert L PTH
6501 E. Commerce Ave. #101.
Kansas City, MO 64120
816-474-5656

Brill, Joachim R PD
30 Westwoods Drive
Liberty, MO 64068
816-781-7979

Burk, Emmett K IM
Westowne III Suite 100
Liberty, MO 64068
816-781-8100

Burroughs, Nathan D OTO
2700 Hospital Dr Suite 430
No Kansas City, MO 64116
816-421-0540

Calhoun, Terry L IM
5601 N Antioch Rd.
Suite 12
Kansas City, MO 64119
816-453-6100

Castillo, Michael E OPH
8227 N. Chatham
Kansas City, MO 64151
816-587-8075

Cook, Jerry W OPH
7010 N Cherry
Kansas City, MO 64118
816-436-4204

Cooper, Barry R DR
2800 Hospital Dr Radiology
N Kansas City, MO 64116
816-221-1600

Cooper, Gary D GE
Suite 100 Westowne III
Liberty, MO 64068
816-781-8100

Curnow, Richard B ORS
Westowne Offices
Liberty, MO 64068
816-781-6066

*Davis, Larry E AN
2800 Hospital Dr.
Kansas City, MO 64116
816-346-7760

Deligeorges, John OPH
5500 N. Oak Med Bld Ste 202
Kansas City, MO 64118
816-455-2020

Devine, Mark W OTO
2700 Hospital Drive
N Kansas City, MO 64116
816-421-0540

DyRagos, Ramon R NS
P. O. Box 28567
Kansas City, MO 64118
816-455-2595

Edwards, Theodore F PD
512 NW 43rd Terrace
Kansas City, MO 64116

Epstein, Mark L GS
P. O. Box 412
Smithville, MO 64089
816-532-4600

Fakhoury, Donald A GP
4030 N Oak St
Kansas City, MO 64116
816-453-0900

Fischer, Edward H CD
122 Woodlands Box 11
Gladstone, MO 64119
816-452-1249

Fish, William W FP
144 Westwoods Dr.
Liberty, MO 64068
816-781-7730

Flanders, Virgil E FP
6804 N. Wayne
Kansas City, MO 64118

Fortin, Don G PS
4444 N. Belleview Suite 204
Kansas City, MO 64116
816-455-3062

Fowler, I C OM
1617 Bentwood
Sun City Center, FL 33570

Gauer, Robt J PD
5601 Antioch Rd
Kansas City, MO 64119
816-453-3000

Gordon, Mark E IM
2900 Baltimore #307
Kansas City, MO 64108
816-753-7990

Haas, Robert W ORS
Suite R Westowne Office
Liberty, MO 64068
816-781-6066

Hagan, John C III OPH
2700 Hospital Dr
550 Professional Bldg N
No Kansas City, MO 64116
816-421-0900

*Hamilton, William V OBG
2700 Hospital Drive #450
No Kansas City, MO 64116
816-221-7171

---

*Doctor of osteopathy.

Harpster, Gene O GS
4800 College Blvd.
Overland Park, KS 66211
913-345-0061

Hayes, Lawrence L GP
8630 N Oak St Trfwy
Kansas City, MO 64155
816-436-1800

Hedges, Richard C OM
2025 Swift
N. Kansas City, MO 64116
816-221-0058

Hendren, Thos H GS
Westowne III Ste 101
Liberty, MO 64068
816-781-3515

Henry, Jos E IM
8901 W. 74th St.
Suite 348
Shawnee Mission, KS 66208
913-432-8000

Hodge, Robt H IM
2204 NE 39th St
Kansas City, MO 64116
816-452-1362

Hunter, James G CHP
4400 Broadway Suite 202
Kansas City, MO 64111
816-346-7800

Jackson, Roger P ORS
340 Professional Bldg North
2700 Hospital Dr.
Kansas City, MO 64116
816-471-6611

Kanne, Marty A FP
8630 N Oak Trafficway
Kansas City, MO 64155
816-436-1800

Katf, Nicola Y P
3 West 126th Terrace
Kansas City, MO 64145
816-444-4082

Kauk, Bruce A IM
2029 Burlington
N Kansas City, MO 64116
816-474-9232

Kelly, Joseph G AN
3622 NE Chouteau Trafficway
Kansas City, MO 64117

Ketcherside, W. Joseph NS
113 Blue Jay Dr. Suite 200
Liberty, MO 64068
816-792-1545

Kirkland, Jerry A IM
8630 North Oak
Kansas City, MO 64155
816-436-1800

Kobbermann, Thomas W OBG
Northland Obstetrics
28 Westwoods Dr.
Liberty, MO 64068
816-781-7280

Kuenzi, Donald E FP
8630 N Oak Trfwy
Kansas City, MO 64155
816-436-1800

*Landers, Gary A EM
2800 Hospital Drive
N Kansas City, MO 64116
816-346-7999

Latimer, Walter N PD
5950 N. Oak Suite 103
Gladstone, MO 64118
816-454-6600

Leslie, Stephen A PDA
6401 N. Prospect
Gladstone, MO 64119
816-454-5200

Lila, Aram IM
1205 N Jesse James Rd
Excelsior Spgs., MO 64024
816-637-2155

*Lillig, James F GP
4110 N.E. Vivion Rd.
Kansas City, MO 64119
816-455-1640

Littlejohn, Robert T ORS
2700 Hospital Drive
N Kansas City, MO 64116
816-474-5240

Loggan, Michael B IM
114 B Westwoods
Liberty, MO 64068
816-781-8445

Luerding, Jeffrey A FP
8630 N. Oak
Kansas City, MO 64155
816-436-1800

MacNaughton, Robert A II R
P. O. Box 5
Smithville, MO 64089
816-792-7083

Mann, Kenneth R IM
Suite 530 2700 Hospital Dr.
Kansas City, MO 64116
816-421-4240

McCalla, John P AN
649 Huntington Rd
Kansas City, MO 64113
816-361-4543

McCanse, Lynn R U
2700 Hospital Suite 200
No. Kansas City, MO 64116
816-842-6717

McCluggage, Newton C IM
2700 Hospital Dr
No. Kansas City, MO 64116
816-421-4240

McCormick, James F CF
4030 N Oak St
Kansas City, MO 64116
816-453-0900

McCray, Stephen A AN
4404 NW Briarcliff Lane
Gladstone, MO 64116
816-453-4688

McGovney, Janice K IM
620 Commercial St.
Smithville, MO 64089
816-532-0200

McKnight, Scott J OPH
2700 Hospital Drive Ste 550
N. Kansas City, MO 64116
816-421-0900

McNamara, Gerald R ORS
Suite 250 2700 Hospital Dr.
NO. Kansas City, MO 64116
816-781-5877

McPhee, Wm R PTH
1205 W 76th St
Kansas City, MO 64114
816-363-2538

Mullins, Bernard L GP
405 E 19th Ave.
No. Kansas City, MO 64116
816-471-2414

Myers, David W OBG
610 S Commercial Ave
Smithville, MO 64089
816-532-4700

Negrete, Abelardo P
2700 Hospital Drive Ste 510
Kansas City, MO 64116
816-474-9921

Nourbakhsh, Mahmoud M GS
405 E 19th Ave
N Kansas City, MO 64116
816-471-0909

Nussbaum, Larry PD
2525 Glenn Hendren Dr.
Liberty, MO 64068
816-781-7200

Papageorge, Dean W OBG
2700 Hospital Dr. Suite 500
No. Kansas City, MO 64116
816-474-5310

Pingleton, William W PUD
Suite 201 851 NW 45th St.
Gladstone, MO 64116

Piontek, James F AN
1495 Hemlock
Liberty, MO 64068

Prickett, David C Jr EM
N Kansas City Mem Hosp.
2800 Hospital Dr
Kansas City, MO 64116
816-842-9833

Purcell, Paul W GP
201 Union Ave. S.E. No. 12
Renton, WA 98056

Reardon, Jane D PD
2700 Hospital Dr. Suite 350
No. Kansas City, MO 64116
816-221-7748

Reeder, Chas C GP
620 Commercial Avenue
Smithville, MO 64089
816-532-0200

Revare, Paul FP
8517 N. Beaman
Kansas City, MO 64154

Robinson, Van M OBG
P. O. Box 2536
Carefree, AZ 85377

Rockwell, Wayne L OBG
2508 Arno
Mission Hills, KS 66208

Ross, Walter R Jr PUD
114-B Westwoods Dr.
Liberty, MO 64068
816-781-8445

Russell, Nancy R IM
5140 North Antioch Road
Kansas City, MO 64119
816-453-5545

Russell, Steven L IM
409 Camelot
Liberty, MO 64068
816-792-1646

Sawyer, Floyd E PD
#5 The Woodlands
Gladstone, MO 64119

Saxon, Keith G OTO
Westowne IV, Suite 205
Liberty, MO 64068
816-781-1001

Schertz, Truman B OPH
2700 Hospital Dr Ste 405
N Kansas City, MO 64116
816-221-7880

Schutz, John P US
1236 Jesse James Road
Excelsior Spgs, MO 64024
816-637-6023

Shinn, Michael E FP
4030 N. Oak Trafficway
Kansas City, MO 64116
816-453-0900

Siegel, Charles PD
6000 N. Oak Trafficway #102
Gladstone, MO 64118
816-453-7771

Simon, Gracita S AN
1020 N Woodland Dr
Kansas City, MO 64118
816-453-1020

Sitzmann, Bryan L FP
4030 North Oak St Trafficway
Kansas City, MO 64116
816-453-0900

Slaughter, Carl R OBG
Rt. 3, Box 320-02
Petie Jean Mountain
Morrilton, AR 72110

*Smith, Charles H OM
6203 Circle Dr.
Kansas City, MO 64118

Somoza, Jose R PTH
6501 E. Commerce Ave. #101
Kansas City, MO 64120
816-452-3538

Sportsman, Weldon L A
7504 N Oak St Trfy
Kansas City, MO 64118
816-436-7100

Stewart, James L IM
9801 Hampton Woods Dr.
Kansas City, MO 64152

Stratman, Clarence A FP
5601 N. Antioch Rd. Suite 14
Kansas City, MO 64119
816-454-2666

Thomas, Fred A D
5601 N Antioch
Kansas City, MO 64119
816-454-3424

Thompson, Frederick E PS
405 E. 19th Ave.
N. Kansas City, MO 64116
816-472-8322

Torres, Paul GS
Gashland Clinic
8630 North Oak
Kanas City, MO 64155
816-436-1800

Triplett, Daniel A OBG
124 Westwoods Drive
Liberty, MO 64068
816-781-7820

True, James D P
508 N.W. 44th St.
Gladstone, MO 64116
816-453-4862

Tumanut, Benesto F OTO
504 NE 70
Gladstone, MO 64118
816-436-2727

Underwood, Johnson III GS
5601 N.E. Antioch Rd. # 9
Kansas City, MO 64119
816-453-4000

Vilmer, Charles E ORS
2030 Swift Ave
No. Kansas City, MO 64116
816-842-8404

Vilmer, Stephen E ORS
7550 W. 99th Terr
Shawnee Mission, KS 66212
913-341-5527

Walker, Donald E Jr P
4320 Wornall Rd. Suite 704
Kansas City, MO 64111
816-561-2524

Waltz, James R GS
Seaport Office Complex
16 Westwoods Drive
Liberty, MO 64068
816-781-9188

Waterman, Franklin M GP
5811 Truman Road
Kansas City, MO 64126

Webb, John M GS
2750 Hospital Dr. Ste. 220
Kansas City, MO 64116
816-474-6464

Weide, Allan R U
P. O. Box 12361
2700 Hosp.Dr.Suite 200
N Kansas City, MO 64116
816-842-6717

---

*Doctor of osteopathy.

Werner, Dean F OM
4609 N. Main
Kansas City, MO 64116
Werner, F. Scott GS
Suite 9 5601 NE Antioch Rd.
Kansas City, MO 64119
816-453-4000
Werner, Franklin C GS
5601 N. E. Antioch Rd. #9
Kansas City, MO 64119
816-453-4000
Wheeler, Paul D OBG
Northland Obstetrics
28 Westwoods Dr.
Liberty, MO 64068
816-474-5310
Williams, John M GP
102 S Forest
Liberty, MO 64068
816-781-4711
Williams, Robert D TS
4444 N. Belleview
Kansas City, MO 64116

Williamson, Geo L ORS
14413 N. 29th Ave.
Phoenix, AZ 85023
816-842-8404
Wilson, David E FP
8630 N Oak Trafficway
Kansas City, MO 64155
816-436-1800
Wilson, Timothy A FP
5800 N.W. Barry Road
Kansas City, MO 64154
816-587-1000
Withrow, John B FP
3925 N Main
Kansas City, MO 64116
816-452-2455
Workman, Chas E ORS
6609 Milhaven Dr.
Mission, KS 66202
Woy, George H ORS
Suite 250 2700 Hospital Dr.
No. Kansas City, MO 64116
816-781-5877
Wright, Earl J PTH
6501 E. Commerce Ave. #101
Kansas City, MO 64120
Young, Patricia A AN
840 W. 57th Terrace
Kansas City, MO 64113
816-453-1393

054—CLINTON

Luckenbill, Paul T GP
Eighth and Frost St
Plattsburg, MO 64477
816-539-2117
Sweiger, James H GP
400 West Clay
Plattsburg, MO 64477
816-539-2117

058—COLE

Allan, James E FP
2709 Industrial Dr.
Suite A
Jefferson City, MO 65109
314-893-5535
Belden, Edgar A PH
2124 Lowell
Jefferson City, MO 65109
314-636-4497
Belshe, Sidney B DR
1922 Brookgreen
Jefferson City, MO 65101
314-636-4215
Bennett, John E FP
St. Mary's Hospital
Jefferson City, MO 65101
Billian, Virginia L P
907-C Leslie
Jefferson City, MO 65101
314-635-2130

Boyer, Peter A IM
1505 Southwest Blvd
Jefferson City, MO 65109
314-634-2620

Braun, Alan L IM
525 Belair
Jefferson City, MO 65109

Bregant, Robt E IM
1505 Southwest Blvd
Jefferson City, MO 65109
314-634-2620
Buffaloe, Robert N FP
1505 Southwest Blvd.
Jefferson City, MO 65109
314-636-7161

*Cameron, Roger W ORS
1433 Southwest Blvd.
Jefferson City, MO 65109
314-636-5285
Carr, George W FP
3823-B Del Ray
Jefferson City, MO 65109
314-635-9999
Cooper, Chas W II FP
300 E Dunklin
Jefferson City, MO 65101
314-636-2169
Courter, Larry P R
RR 1 Box 400
Osage Beach, MO 65065
Cox, Curtis S NS
1433 Southwest Blvd.
Jefferson City, MO 65109
314-636-5285

Cox, Wm A FP
Admiral House Apt 201-A
825 S. Gulfview Blvd.
Clearwater Bch, FL 34630
Craighead, Michael L GS
1309 Edgewood
Jefferson City, MO 65109
314-635-2300
Davisson, Walter F OPH
1820 Southwest Blvd.
Jefferson City, MO 65101
314-635-0115
Denton, John L OBG
200 St. Marys Medical Plaza
Suite 102
Jefferson City, MO 65101
314-634-3666
Doerhoff, Adelia L AN
1015 Madison
Jefferson City, MO 65101
314-635-5010
Doerhoff, Alan R GS
1111 Madison
Jefferson City, MO 65101
314-635-5010
Doerhoff, Carl R GS
1111 Madison St.
Jefferson City, MO 65101
314-635-5010
Domke, Henry F FP
Rt. 2, Box 479
New Bloomfield, MO 65063
314-634-5000
Exon, C S GS
1505 Southwest Blvd
Jefferson City, MO 65109
314-634-3334
Falzone, John J U
Urology Care Inc.
1025 Northeast Dr.
Jefferson City, MO 65101
314-636-5115
Ferris, Robert E OBG
200 St. Marys Medical Plaza
Suite 102
Jefferson City, MO 65101
314-636-5248
*Frederick, Mark R AN
915 Leslie Blvd Suite E
Jefferson City, MO 65101
314-635-5533
Fulks, Richard B GP
Box 410
California, MO 65018
314-796-2523

Gallagher, Lionel M GP
102-A Dahler St
California, MO 65018
314-796-3312
*Giffen, Lawrence E FP
1606 Hayselton
Jefferson City, MO 65109
314-635-0916
Gordon, James S AN
600 Boonville Rd
Jefferson City, MO 65101
314-635-5533
Guhleman, Henry V P
2018 Greenberry Rd.
Jefferson City, MO 65101
314-635-2592
Gunn, Victoria D
1026 B Northeast Dr.
Jefferson City, MO 65101
314-634-4200
*Hancock, Thomas J FP
1111 Madison St.
Jefferson City, MO 65101
314-635-6156
Handler, Fred P PTH
139L North Central
Clayton, MO 63105
314-721-5833
Harmon, Robert G IM
P. O. Box 570
1730 E. Elm
Jefferson City, MO 65102
314-751-4330

Hauser, Robert J OBG
1431 Southwest Blvd
Jefferson City, MO 65109
314-636-5248
Henry, Lawrence D PTH
715 Swifts Highway
Jefferson City, MO 65109
314-636-8818
Hernandez, J. Humberto FP
RR3 Box 99
California, MO 65018
314-796-3143
Hooshmand, Ahmad N
915 SW Blvd. Suite E
Jefferson City, MO 65109
314-634-4700
Jennett, Richard B GE
200 St. Mary's Plaza #302
Jefferson City, MO 65101
314-636-7183
Kanagawa, Harold K IM
200 St. Marys Plaza
Jefferson City, MO 65101
314-636-7183

Kimlinger, William R FP
2637 Kenwood Dr.
Jefferson City, MO 65109
314-882-2996
Klebba, Larry B FP
P O Box 6885
Jefferson City, MO 65102
314-636-3231
Krautmann, John J ORS
1433 Southwest Blvd
Jefferson City, MO 65109
314-636-5285
Landsbaum, Charles J IM
200 St. Marys Plaza
Suite 302
Jefferson City, MO 65101
314-636-7183
*LaPointe, Neal G GP
Family Medical Center
420 E. High Street
Jefferson City, MO 65101
314-635-0916
Leslie, James T ORS
1433 Southwest Blvd
Jefferson City, MO 65109
314-636-5285
Loyd, Earl L IM
R.R. 3 Box 3522
Riviera Heights
Holts Summit, MO 65043
Lueckenhoff, Rebecca R FP
2709 Industrial Drive
Jefferson City, MO 65109
314-636-3388
Lyskowski, John C P
1203 Elmerine
Jefferson City, MO 65101
314-636-2082
Marshall, William H OBG
200 St. Marys Medical Plaza
Suite 102
Jefferson City, MO 65101
314-636-5248
Marty, David R OTO
1021 Northeast Dr.
Jefferson City, MO 65101
314-635-7901
Matthews, John I IM
1314 Moreau Dr
Jefferson City, MO 65101
314-636-7183
McCaffree, Mary K IM
812 Crestmere
Jefferson City, MO 65109
314-634-2620

McIntire, Timothy L PTH
100 St. Mary's Blvd.
Jefferson City, MO 65101
314-635-7642
Meier, Francis X FP
1913 Hayselton Dr
Jefferson City, MO 65101
314-636-9742
Meyer, Randall E CD
200 St. Mary's Medical Plaza
Suite 302
Jefferson City, MO 65101
314-636-7183
*Michael, Roy A AN
1015 Madison St.
Jefferson City, MO 65101
314-635-5010

Miller, Donald IM
Route 6 Box 320
Jefferson City, MO 65101
314-636-7183
*Morley, Ronald F AN
915 Leslie Blvd.
Jefferson City, MO 65101
314-635-5533
Ossman, Julian A GS
2407 W Main
Jefferson City, MO 65109
314-636-9742

---

*Doctor of osteopathy.

Ragland, John E GP
P O Box 517
Linn, MO 65051
314-897-2237
Rea, James L OTO
1021 Northeast Dr.
Jefferson City, MO 65101
314-635-7901
Rice, Karen H IM
1505 Southwest Blvd.
Jefferson City, MO 65109
314-634-2620
Robbins, Thomas D FP
200 St. Marys Medical Plaza
Suite 202
Jefferson City, MO 65101
314-635-9999
Ryan, Thomas J ORS
1433 Southwest Blvd
Jefferson City, MO 65109
314-636-5285
Sanders, Jack S CD
1505 Southwest Blvd
Jefferson City, MO 65109
314-634-2620
Scearce, Robert L DR
420 Crystal View Terr.
Jefferson City, MO 65109
314-636-4215

*Schekorra, Fred W AN
915 Leslie Blvd. Suite E
Jefferson City, MO 65101
314-635-5533
Scherr, David D ORS
1111 Madison St
Jefferson City, MO 65101
314-634-4202
Schmidt, Jerome H U
1025 Northeast Drive
Jefferson City, MO 65101
314-636-5115
Schokker, Johannes GS
1431 Southwest Blvd
Jefferson City, MO 65109
314-635-9011
Scott, E David FP
2009 E McCarty
Jefferson City, MO 65101
314-635-2542
Shull, G D FP
1925 Hayselton Drive
Jefferson City, MO 65109
314-635-1460
Siu, Kenneth K C GS
1309 Edgewood
Jefferson City, MO 65109
314-635-2300
Stauffer, Harry B OPH
830 Boonville Road
Jefferson City, MO 65109
Stauffer, Larry K OPH
700 W. High
P. O. Box 1669
Jefferson City, MO 65102
314-634-3221
Stricker, Harold C OBG
Route 5, Box 535 Zion Road
Jefferson City, MO 65109
314-636-8887
Su, Philo S OBG
2712 Plaza Drive
Jefferson City, MO 65109
314-893-5500
Sugarbaker, Everett D GS
503 E High St
Jefferson City, MO 65101
314-636-8542
Summers, Jos S DR
515 East High
Jefferson City, MO 65101
314-636-2657
Tanner, Robert H FP
1505 Southwest Blvd
Jefferson City, MO 65109
314-636-7161
Taylor, Leon A GP
1104 W Main St
Jefferson City, MO 65109
Thornsberry, Michael FP
207 North 1st St.
Owensville, MO 65066
VanVranken, Eugene E PH
2037 Tower
Jefferson City, MO 65109
314-635-5017
Wankum, Robert P OPH
1101 D Southwest Blvd.
Jefferson City, MO 65109
314-634-2722
Watts, Byron E R
2937 Valley View Terrace
Jefferson City, MO 65109
314-893-2937

Weiss, James J FP
701 W. High Street
Jefferson City, MO 65101
314-636-3192
Werth, Joseph A D
1233 Jefferson St.
Jefferson City, MO 65109
314-634-2933
Westhoff, David D IM
1505 Southwest Blvd
Jefferson City, MO 65109
314-634-2620
Winegar, Alvon C OBG
819A Southwest Blvd.
Jefferson City, MO 65109
Winton, Mark D IM
200 St. Mary's Blvd Ste 302
Jefferson City, MO 65101
314-636-7183
*Young, Michael A NEP
1111 Madison St.
Jefferson City, MO 65101
314-635-2495

066—D-H-P-D

Abdel-Salam, Ahmed S GS
Rt #1 Praire Height
Bolivar, MO 65613
417-326-2491
Carnell, Billy M GP
P. O. Box 830
Buffalo, MO 65622
417-345-6101
Crabtree, Jay B DR
Citizens Memorial Hospital
Bolivar, MO 65613
417-326-6000
Dias, Wenceslaus F GS
1245 N. Butterfield Rd.
P. O. Box 820
Bolivar, MO 65613
417-326-3630
Donnell, William S Jr FP
1300 N. Oakland
Bolivar, MO 65613
417-326-6021
Griffin, M E FP
3433 Cooper Blvd.
Springfield, MO 65802
Griffin, Olin A PH
3433 Cooper Blvd.
Springfield, MO 65802
Kahler, Monte R GP
Route 4 Box 14A
Bolivar, MO 65613
417-326-7676
Koch, Penny H FP
1300 North Oakland
Bolivar, MO 65613
417-326-6021
Magaw, David C GP
Rt 1 Box 145
Everton, MO 65646
McCraw, Doyle C GP
711 N. Main
P. O. Box 117
Bolivar, MO 65613
417-326-4112
Molchan, James L GS
P. O. Box 507
708 N. Pomme De Terre
Bolivar, MO 65613
417-326-3765
Nix, J. Gustavo IM
1100 S. Springfield
Bolivar, MO 65613
314-326-8500

Ramakrishnan, Vasuki PD
451 S. Albany
Bolivar, MO 65613
417-326-9500
Wright, Keith A FP
1300 N. Oakland
Bolivar, MO 65613
417-326-6021

070—DUNKLIN

Cheng, Tuan Chou U
P. O. Box 309
Kennett, MO 63857
314-888-4977

English, Wallace D FP
Senath Nursing Home
Senath, MO 63876

Kakaiya, Dilip H GS
P.O. Box 607
Kennett, MO 63857
314-888-2628

Kuo, Gong T OBG
501 Teaco Rd
Kennett, MO 63857
314-888-1117

Miltenberger, Paul C GS
705 West Washington
Kennett, MO 63857
Morehead, Wm E GP
505 N Beckwith
Malden, MO 63863
314-276-2221
Newland-Pagan, Yvonne C
1231 First Street
Kennett, MO 63857
314-888-6011
Palerske, Robt L FP
Hornersville, MO 63855
Pehlman, Jos E PD
1207 North Douglas
Box 526
Malden, MO 63863
314-276-3884
Robinson, Nicholas F IM
906 St. Francis
Kennett, MO 63857
314-686-6603
Sinasa, Surat IM
501 Teaco Rd.
Kennett, MO 63857
314-888-3533
Sisler, Maynard L IM
217 College
Kennett, MO 63857
314-888-4992
Soonattrakul, Wuthisak IM
105 E. Washington
Kennett, MO 63857
314-888-1137
Tungsiripat, Soros PD
604 Teaco Rd.
Kennett, MO 63857
314-888-9281

Zimmerman, Joe A GP
1105 White Oaks Pl.
Kennett, MO 63857
314-888-4522

074—F-G-W

Agasino, Gaudencio L OBG
#20 Hughes Ford Road
Sullivan, MO 63080
314-468-8059
Allen, Jerry H PD
800 E. Fifth St
Suite 202
Washington, MO 63090
314-239-7892
Apte, Sunil M U
800 East Fifth St. Suite 305
Washington, MO 63090
314-239-7559
Aulenbacher, Carl E GS
800 E. 5th Suite 104
Washington, MO 63090
314-239-7727
Baker, Donald L FP
301 Hwy 50 West
Union, MO 63084
314-583-2508
Banerjee, Dilip IM
800 E 5th Suite 205
Washington, MO 63090
314-239-2711
Bonney, Saml C EM
Urgi Care Inc.
1801 Heritage Hills Ctr
Washington, MO 63090
314-239-4123
Brockman, Kirk E FP
270 N. Commercial
St. Clair, MO 63077
314-629-3300
Brunworth, David FP
10 Franklin
Washington, MO 63090
314-239-2741
Cassat, James D GS
800 E. 5th St. Suite 104
Washington, MO 63090
314-239-7727
Colter, Kim D FP
800 E. 5th St
Washington, MO 63090
314-239-4100
Crane, John B P
1113 E. 5th St.
Washington, MO 63090
314-239-7705
Crespo, Horacio T FP
213 E. Boonslick Rd.
Warrenton, MO 63383
314-456-2633

Crespo, Remedios R FP
213 E. Booneslick Rd.
Warrenton, MO 63383
314-456-2633
Dean, Philip D N
800 E. 5th St. Suite 112
Washington, MO 63090
314-239-5444

---

*Doctor of osteopathy

Dierberg, Dale F DP
2753 Autumn Run Ct.
Chesterfield, MO 63017
314-486-2191

Eisenmann, Benj P FP
New Haven, MO 63068
314-237-2123

Farrell, Sammy L FP
10 Franklin
Washington, MO 63090
314-239-2741

Grisham, Thomas D FP
10 Franklin Ave.
Washington, MO 63090
314-239-2741

Hoelscher, Harold F GP
528 Cedar
Lake Ozark, MO 65049

Jamroz, Greg A R
200 Madison Ave.
Washington, MO 63090
314-239-7711

Kim, Yang H OBG
800 East 5th St.
Suite 105
Washington, MO 63090
314-239-6600

Lentz, Kathy J OPH
12 West 12th Street
Washington, MO 63090
314-239-2008

Lenzenhuber, Karl J R
200 Madison Ave.
Washington, MO 63090
314-239-7711

Long, Timothy P FP
Box 308
Marthasville, MO 63357
314-433-5411

Marchiando, Albert W OTO
800 E Fifth St. Suite 113
Washington, MO 63090
314-239-1770

Marcum, John D FP
1020 St. Clair Plaza
St. Clair, MO 63077
314-629-6030

Matthews, Thomas D PD
800 E. 5th St. Suite 202
Washington, MO 63090
314-239-9011

Mitchell, Thos J FP
865 N. Commercial
St. Clair, MO 63077
314-629-1141

Morehouse, Paul D GS
900 E. 8th Street
Washington, MO 63090
314-239-4144

O'Connor, John J FP
615 S. Third
Warrenton, MO 63383
314-456-3858

Pau, Michael E IM
800 E. 5th St.
Washington, MO 63098
314-239-0444

Pawson, Perry G PTH
St Francis Mercy Hosp.
Washington, MO 63090
314-239-7711

Pichardson, Geo A FP
301 Hwy 50 West
Union, MO 63084
314-583-2508

Pichardson, Wm P FP
301 Hwy 50 West
Union, MO 63084
314-583-2508

Pudloff, Martin PD
800 E. 5th St. #304
Washington, MO 63090

Seeck, Linda E OBG
800 E. 5th St. Suite 111
Washington, MO 63090
314-239-1344

Shaw, James T FP
Southwest Medical Associates
Route 1, Box 30-1
Hermann, MO 65041
314-486-2118

Shea, James G IM
2 Hillcrest Place
Washington, MO 63090
314-239-7500

Short, Howard N OPH
800 E 5th St. Suite 301
Washington, MO 63090
314-239-1650

Sincox, Chas H FP
205 Elm
Washington, MO 63090
314-239-7566

Smith, Kenneth B IM
800 E 5th Suite 102
Washington, MO 63090
314-239-7500

Steinberger, Pobert OPS
P.O. Box 149
Washington, MO 63090
314-239-2900

Tucker, Leslie E IM
Suite 201 800 E. Fifth St.
Washington, MO 63090
314-239-7344

Turner, James D FP
800 E. 5th
Washington, MO 63090
314-239-4100

Workman, Geo M FP
Southwest Medical Associates
Poute 1, Box 30-1
Hermann, MO 65041
314-486-2118

078—GRAND RIVER

Bohnsack, Ralph W GP
P.O. Box 3860
Estes Park, CO 80517
303-586-3655

Boulware, William T IM
103 Eleventh St. 14
Chillicothe, MO 64601
816-646-3800

Cross, Albert D GP
618 E First St
Trenton, MO 64683
816-359-4385

Daley, Frank P GP
207 West Berry
Hamilton, MO 64644
816-583-2014

Dixon, John P GS
125 East Lockling Ave.
Brookfield, MO 64628
816-258-3301

Duffy, Oliver F US
Rt 4, Box 118
Trenton, MO 64683
816-359-3036

Edgren, Donald C IM
1312 N. Walnut
Cameron, MO 64429
816-632-2101

Fair, Wm L FP
1705 Calhoun St.
Chillicothe, MO 64601
816-646-3773

Gale, Joseph F GP
1710 Polk St.
Chillicothe, MO 64601
816-646-0421

Galvez, Sisenando P IM
105 S Kansas
Marceline, MO 64658
816-376-3521

Gearhart, Merriam GS
P.O. Box 449
Bethany, MO 64424
816-425-3152

Greenlaw, Cal W IM
Hedrick Office Bldg Suite 16
Chillicothe, MO 64601
816-646-4345

Hall, Terry E FP
P. O. Box 233
2525 Miller
Bethany, MO 64424
816-425-7443

Howell, Billy D GP
125 E. Lockling
Brookfield, MO 64628
816-258-7235

Kampschmidt, Donald L FP
1409 N. Jefferson St.
Carrollton, MO 64633

Mandler, George OTO
Hedrick Office Bldg. #9
103 Eleventh St.
Chillicothe, MO 64601
816-646-2847

Nixon, Edward E GP
Gallatin, MO 64640
816-663-2948

Patel, Hansa N FP
P. O. Box 506
Bethany, MO 64424
816-425-3150

Patel, Natu B FP
P. O. Box 506
Bethany, MO 64424
816-425-3150

Platz, John H GP
101 S. Main
Carrollton, MO 64633
816-542-0496

Pivera, Minerva M IM
308 N. Main St.
Brookfield, MO 64628
816-258-3324

Pivera, Pepito C GS
308 N Main
Brookfield, MO 64628
816-258-3324

Pose, John F P
2105 Meadow Lane Circle
Chillicothe, MO 64601
816-646-0003

Pyan, David FP
902 Custer
Trenton, MO 64683
816-359-4317

Santrer, Floyd A FP
Rt 1, Box 100F
Marceline, MO 64658
816-376-3070

Seialathar, Pamasamy GS
701 East First Street
Trenton, MO 64683
816-359-2218

Smith, Robt W GP
P. O. Box 497
Brookfield, MO 64628
816-258-2294

Szymanski, Stanley P R
Box 366
Macon, MO 63552
816-385-3245

Trinidad, Hermanito P GS
103 - 11th St. Suite 8
Chillicothe, MO 64601
816-646-1780

Yoon, Jin S OBG
103 11th St
Chillicothe, MO 64601
816-646-3746

Youssef, Redwan OPH
103 Eleventh St. Suite 11
Hedrick Office Building
Chillicothe, MO 64601
816-646-2227

082—GREENE

Alcancia, Elpidio Y TP
3150 S. National
Springfield, MO 65807
417-887-4270

Allen, Jerry H GS
1324 S. Fairway
Springfield, MO 65804

Allison, James B P
2200 E Sunshine Ste 301
Springfield, MO 65804
417-883-2525

Ameduri, Clifford J PM
1965 S. Fremont Suite 3600
Springfield, MO 65804
417-887-0100

Ancheta, Apolinario A GS
1443 N. Pobberson Suite 504
Springfield, MO 65802
417-869-4145

Anderson, Douglas A PTH
1235 East Cherokee
Springfield, MO 65804
417-885-2961

Anderson, Lynn A D
1900 S. National Ste 3800 NW
Springfield, MO 65804
417-882-2277

Andrews, Elizabeth J PD
1965 S. Fremont #2900
Springfield, MO 65804
417-881-2151

Andrews, Paul E IM
1965 S. Fremont Suite 1500
Springfield, MO 65804
417-882-1822

Anthony, Dallas D P
1322 South Pickwick
Springfield, MO 65804
417-862-9776

Armstrong, Stephen D PHU
1001 E Primrose
Springfield, MO 65807
417-885-7130

Arnold, Paul N OPH
1965 S. Fremont Ste 2700
Springfield, MO 65804
417-886-3937

Ash, Charles J OPS
1443 N Pobberson St
Suite 308
Springfield, MO 65802
417-836-8800

Ashley, Michael E GS
3231 South National
Springfield, MO 65807
417-883-7422

Ashley, Thos F GS
3231 South National
Springfield, MO 65807
417-883-7422

Atkinson, Lance D FP
626 E. Battlefield
Springfield, MO 65807
417-881-2180

---

*Doctor of osteopathy.

Auner, Cecil R IM
Family Pract Residency Prog
1443 N. Robberson #802
Springfield, MO 65802
417-882-7252
Avery, David M TS
3231 S. National
Springfield, MO 65807
417-883-7422
Axness, Mark E AN
3660 S. National Suite 350
Springfield, MO 65807
417-881-0750
Back, Donald K IM
3231 South National
Springfield, MO 65807
417-883-7422
Bagby, Jack M Jr AN
1900 South National #1800
Springfield, MO 65804
417-887-6323
Bailey, Alan H PUD
2242 Barataria
Springfield, MO 65804
417-881-4573
Baldwin, Richard M OBG
1000 E. Primrose Suite 440
Springfield, MO 65807
417-885-6262
Barnhill, Floyd R OTO
1965 S. Fremont #1950
Springfield, MO 65804
417-887-5750
Bartlett, John E DR
1443 N. Robberson Ste. 208
Springfield, MO 65802
417-865-5521
Bartley, Richard L FP
719 W. Katella Court
Springfield, MO 65807
417-883-2225
Bell, Laird A OBG
1900 S. National #2960
Springfield, MO 65804
417-887-5500

Benson, Ronald G OBG
1000 E. Primrose, Suite 200
Springfield, MO 65807
417-887-0966
Bentley, John D IM
1900 S National
Suite 2200
Springfield, MO 65804
417-887-4000
Berner, Carol T FP
1900 S. National Suite 2800
Springfield, MO 65804
417-881-8818
Berry, Paul T FP
2135 Shady Glen
Springfield, MO 65804
417-883-6290
Best, John F CD
3231 South National
Springfield, MO 65807
417-883-7422
Blades, Ross D U
3231 S. National
Springfield, MO 65807
417-883-7422
Blaine, James R EM
St. Johns Reg. Health Ctr.
1235 E. Cherokee
Springfield, MO 65804
417-885-2000
Bonebrake, Albert J OBG
1900 South National
Suite 2960 NW
Springfield, MO 65804
417-887-5500
Bonebrake, Mac D OBG
1900 S National #2960NW
Springfield, MO 65804
417-887-5500
Boone, Martin H Jr AN
1900 South National #1800
Springfield, MO 65804
417-887-6323
Boone, Vicky L OBG
1965 S. Fremont Suite 1800
Springfield, MO 65804
417-887-7887
Borja, Egbert R IM
3525 S. National Suite 101
Springfield, MO 65807
417-886-8264
Borup, Jerrell L AN
3660 S. National Ste. 350
Springfield, MO 65807
417-881-0750

Brabson, John H PUD
3231 S. National
Springfield, MO 65807
417-883-7422

Brent, Lanny R Jr DR
1443 N. Robberson, Ste. 208
Springfield, MO 65802
417-865-5521
Brian, Wm J AN
1900 S. National #1800
Springfield, MO 65804
417-887-6323
Briggs, Thomas B N
1965 S. Fremont Ste 3700
Springfield, MO 65804
417-887-6880
Bright, James E P
1965 South Fremont
Suite 2100
Springfield, MO 65804
417-882-3000
Broaddus, Loren E IM
1001 E. Primrose
Springfield, MO 65807
417-885-7220
Brockman, M. Douglas IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771
Brooks, John E N
1000 E. Primrose #310
Springfield, MO 65807
417-886-0005
Brown, David W ORS
1900 S. National
Suite 1980 NW
Springfield, MO 65804
417-882-6040
Brown, James T GS
2222 E Berkeley
Springfield, MO 65804
417-881-9011
Brownsworth, Ronnie D N
3231 S. National Ave.
Springfield, MO 65807
417-883-7422
Bult, Mark J AN
3660 S. National Suite 350
Springfield, MO 64807
417-881-0750
Burkey, Jordan W OTO
1000 East Primrose Suite 360
Springfield, MO 65807
417-887-9900
Busiek, Paul J PD
Rt 9 Box 402
Springfield, MO 65809
417-881-4391

Bussmann, Donald W Jr U
3231 S. National
Springfield, MO 65807
417-883-7422
Bussmann, Yvonne L PD
3231 S. National
Springfield, MO 65807
417-885-0810
Cady, Roger K FP
1328 E. Evergreen
Springfield, MO 65803
417-865-5940
Caldwell, Joseph I A
3231 South National
Springfield, MO 65807
417-883-7422
Callaway, Guy D Jr IM
901 E. Portland
Springfield, MO 65807
417-862-8612
Canlas, Mario P NS
1965 S. Fremont Ste. 2500
Springfield, MO 65804
417-882-5216

Carlton, Lynn N DR
Ozarks Radiology Group LTD
P. O. Box 4763 GSS
Springfield, MO 65808
417-883-3727

Carolla, Robert L ONC
1900 South National
Suite 3600 NW
Springfield, MO 65804
417-882-4880
Carr, Phillip W CD
3231 South National
Springfield, MO 65807
417-883-7422
Ceaser, James E CD
1001 E. Primrose
Springfield, MO 65807
417-885-7210

Ceaser, Nancy Z PD
1000 E. Primrose Ste. 140
Springfield, MO 65807
417-885-6184

Chase, Larry K IM
1965 S. Fremont Suite 3200
Springfield, MO 65804
417-887-2050

Christensen, Harold L IM
1001 E. Primrose
Springfield, MO 65807
417-885-7210

Christiansen, Stephen D CS
Nat. Ave. Med. Bldg. #2800
1900 S. National
Springfield, MO 65804
417-881-8819

Christy, Raymond A PD
1111 S Glenstone Suite 3-102
Springfield, MO 65804
417-862-0650
Christy, Richard R P
1965 Fremont Ave. Suite 2650
Springfield, MO 65804
417-881-4949
Clarke, Michael J GS
3530 E. Catalpa
Springfield, MO 65809
417-883-3363
Clarke, Michael S ORS
1900 S. National
Suite 1950
Springfield, MO 65804
417-882-1900
Clary, Wm F P
1722-J S. Glenstone
Springfield, MO 65804
417-881-3124
Clayton, Edgar L PDA
2446 Brentwood Ave.
Springfield, MO 65804
417-881-1263
Clouse, John W ONC
Cox Cancer Center
1423 North Jefferson
Springfield, MO 65802
417-836-3436
Cochran, Thos F IM
3231 South National
Springfield, MO 65807
417-883-7422
Collins, Douglass D PD
1000 E. Primrose Suite 560
Springfield, MO 65807
417-882-1600
Collison, K Michael FP
Smith-Glynn Callaway Clinic
2619 North Kansas
Springfield, MO 65803
417-831-8074
Conrad, Raymond C OBG
1338 S. Delaware
Springfield, MO 65804
417-881-6156
Cook, James P AN
1900 South National #1800
Springfield, MO 65804
417-887-6323
Cooper, C Wesley CD
3231 South National
Springfield, MO 65807
417-883-7422

Cordonnier, James K GS
1001 E. Primrose
Springfield, MO 65807
417-885-7220
Corry, Francis M GS
3231 South National
Springfield, MO 65807
417-883-7422
Coscia, Robert L GS
1900 S. National Suite 2300
Springfield, MO 65804
417-887-4776
Coulter, James W PUD
1001 E. Primrose
Springfield, MO 65807
417-885-7160
Cox, W. Welby ONC
1900 S. National Ste. 3600NW
Springfield, MO 65804
417-882-4880
Crawford, Oral B AN
1900 South National #1800
Springfield, MO 65804
417-887-6323
Crighton, John C GS
1900 S. National Suite 2300
Springfield, MO 65804
417-887-4776
Crighton, M. Nanette AN
3660 S. National Ste. 350
Springfield, MO 65807
417-881-0750
Crosthwait, Edward L GP
1630 N. Jefferson Ave.
Springfield, MO 65803
417-883-9100
Cunningham, D. Dean GP
1443 N. Robberson #805
Springfield, MO 65802
417-836-8817

Cunningham, Richard D IM
1965 S. Fremont #1500
Springfield, MO 65804
417-882-1822

Cunningham, William F ONC
1900 S. National
Suite 3600 North Wing
Springfield, MO 65804
314-882-4880

---

*Doctor of osteopathy.

Curry, Stephan R AN
3660 S. National Ste. 350
Springfield, MO 65807
417-881-0750

Daily, James M AN
3660 S. National Suite 350
Springfield, MO 65807
417-881-0750

Danielsson, Ernst P PS
1443 N. Robberson Ste. 901
Springfield, MO 65802
417-862-9556

Davis, Thomas P III IM
1965 South Fremont #3500
Springfield, MO 65804
417-887-1771

Deckard, Shelby W IM
1965 S. Fremont #1500
Springfield, MO 65804
417-882-1822

Decker, Albert I IM
1215 S. Delaware
Springfield, MO 65804
417-831-6718

Dexter, J. Kent IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771

DeLeeuw, Karel A MFS
1965 S. Fremont Ste 1000
Springfield, MO 65804
417-887-8800

Dillard, Frin M ORS
1900 S. National
Suite 1980 NW
Springfield, MO 65804
417-882-6040

Dills, Joseph N GS
RD 2 Box 1504
Williston, FL 32696

Dix, Patricia M OBG
1000 E. Primrose #170
Springfield, MO 65807
417-885-4037

Domann, Darrel D PS
1443 N. Robberson Ste. 901
Springfield, MO 65802
417-862-9556

Dowell, J Larry FP
Box 39
Strafford, MO 65757
417-736-2998

Druet, Robert L CLP
1235 E. Cherokee
Pathology Dept
Springfield, MO 65804
417-885-2000

Duda, Ralph J Jr. END
3231 S. National
Springfield, MO 65804
417-883-7422

Duensing, George F PTH
1000 E. Primrose
Springfield, MO 65807
417-885-4646

Duff, James E IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771

Duncan, Douglas M ORS
1001 E. Primrose
Springfield, MO 65807
417-885-7170

Duncan, Robt D GS
1234 E. Loren
Springfield, MO 65804
417-869-1665

Egbert, Robert N NM
1443 N. Robberson Ste. 403
Springfield, MO 65802
417-862-6717

Elkins, Ronald F CRS
1601 S. Fort
Springfield, MO 65807
417-864-5080

Ellis, Francis J OBG
1900 S. National
Suite 2960 NW
Springfield, MO 65804
417-887-5500

Ellis, Harry L U
1965 S. Fremont Suite 3100
Springfield, MO 65804
417-882-0300

Ely, Norman B R
1675-J E. Seminole
Springfield, MO 65804
417-881-5033

Evans, Ezra L PD
2457 E Barataria
Springfield, MO 65804
417-883-7495

Farber, Barry S U
1900 S. National #2900
Springfield, MO 65804
417-887-9115

Farthing, Gene W GS
1235 East Walnut St.
Springfield, MO 65802
417-862-6312

Ferguson, John L IM
1001 E. Primrose
Springfield, MO 65807
417-885-7130

Ferguson, John F NS
1965 S. Fremont Suite 3700
Springfield, MO 65804
417-887-6880

Ferguson, John P OBG
1900 S. National #3960 NW
Springfield, MO 65804
417-887-5500

Ferrell, Thos F GS
1525 Meadowmere
Springfield, MO 65804
417-862-3027

Fink, Roger L PTH
1000 E. Primrose #130
Springfield, MO 65807
417-885-4646

Fogle, Philip R OBG
1900 S National
Suite 1500
Springfield, MO 65804
417-887-1646

Foote, Daniel D AN
1900 S. National #1600
Springfield, MO 65804
417-887-6323

Freiman, Paul C CD
3231 S. National
Springfield, MO 65807
417-883-7422

Froehlich, Thomas W IM
1900 South National #3600
Springfield, MO 65804
417-882-4880

Gaska, Walter J PS
3231 South National
Springfield, MO 65807
417-883-7422

Gentry, Jim FP
1301 South Glenstone
Springfield, MO 65804
417-831-7399

Gentry, Michael A D
1722K S. Glenstone
Springfield, MO 65804
417-883-8162

Gerdes, John A PTH
1235 E. Cherokee
Springfield, MO 65804
417-885-2873

Gerdes, K. Eric R
1675-J East Seminole
Springfield, MO 65804
417-881-5033

Gerecht, Wolfe B ID
1001 E. Primrose
Springfield, MO 65807
417-885-7280

German, Walter A OBG
3231 South National
Springfield, MO 65807
417-883-7422

Gessler, James A OPH
3231 S. National
Springfield, MO 65807
417-883-7422

Geter, Rodney K PS
3231 S. National
Springfield, MO 65807
417-883-7422

Gibson, James D GS
1001 E. Primrose
Springfield, MO 65807
417-885-7240

Giddings, Frank C DR
1211 S Pickwick
Springfield, MO 65804
417-862-4834

Gill, Paul J IM
3231 South National
Springfield, MO 65807
417-883-7422

Glazzard, Charles D P
1235 Cherokee
Springfield, MO 65804
417-885-3298

Golden, Samuel F PD
1965 S. Fremont Suite 3400
Springfield, MO 65804
417-886-9102

Goodman, Douglas E R
1675-J E. Seminole
Springfield, MO 65804
417-881-5033

Goodwin, J. Wendall IM
3231 South National
Springfield, MO 65807
417-883-7422

Gose, Don F CPS
1001 Primrose St.
Springfield, MO 65807
417-885-7240

Gotti, Edward W NM
1500 E. Sunshine Ste. F
Springfield, MO 65804
417-887-1320

Grace, Steve CPG
1900 S. National #2960NW
Springfield, MO 65804
417-887-5500

Grant, Ruth HEM
1900 S National
Suite 3600 NW
Springfield, MO 65804
417-882-4880

Graves, Kathleen L OBG
1965 S. Fremont #1800
Springfield, MO 65804
417-887-7887

Griesemer, Bernard A PD
3014J E Sunshire
Springfield, MO 65804
417-887-0727

Gurian, Lawrence E GE
1001 E. Primrose
Springfield, MO 65807
417-885-7260

Gutzmer, Ernest W FP
2714 E Glenwood
Springfield, MO 65804
417-887-4469

Gwin, Edward IM
1001 E. Primrose
Springfield, MO 65807
417-885-7160

H'Doubler, Charles GS
1443 N. Robberson Ste. 705
Springfield, MO 65802
417-831-4833

H'Doubler, Francis T GS
1900 S. National #2950
Springfield, MO 65804
417-882-3066

H'Doubler, Peter B GS
1965 S. Fremont #2200
Springfield, MO 65804
417-882-9400

Habiger, Thomas C N
3231 S. National
Springfield, MO 65807
417-883-7422

Hacker, Douglas A NR
1675-J East Seminole
Springfield, MO 65804
417-881-5033

Hackett, Earl R N
1965 S. Fremont #2800
Springfield, MO 65804
417-881-5590

Haddow, Alastair D ID
1900 S. National Suite 2200
Springfield, MO 65804
417-887-4000

Hall, David W FP
1721 S. Meadowview
Springfield, MO 65804
417-883-3758

Hall, Durward G GS
2442 S Fremont
Springfield, MO 65804
417-881-2515

Halverson, Larry W FP
1443 N. Robberson, Ste. 802
Springfield, MO 65802
417-836-8817

Hamburg, Frederic L PD
1000 E. Primrose Suite 560
Springfield, MO 65807
417-882-1600

Hanks, Michael S PD
1000 E. Primrose Suite 320
Springfield, MO 65807
417-881-6688

Hanss, Armand W IM
642 S Mission
Springfield, MO 65809
417-869-3774

Hardman, William A GS
3525 S. National
Springfield, MO 65807
417-887-7479

Hargis, James L PUD
3231 South National
Springfield, MO 65807
417-883-7422

Harmon, Ben C ORS
3231 South National
Springfield, MO 65807
417-883-7422

Harris, Hugh G CPS
1900 S. National Suite 1950
Springfield, MO 65804
417-882-1900

Harvey, Harold D PS
1443 N. Robberson #205
Springfield, MO 65802
417-831-0400

Harvey, Judith E OPH
1443 N. Robberson Suite 501
Springfield, MO 65802
417-805-2227

---

*Doctor of osteopathy.

Hasler, Galen R ONC
3231 South National
Springfield, MO 65807
417-883-7422
Hawkins, Calvin D R
1675-J East Seminole
Springfield, MO 65604
417-881-5033
Hayes, Stanley P IM
3231 South National
Springfield, MO 65807
417-883-7422
Heinz, George PUD
1900 S National #2200
Springfield, MO 65804
417-887-4000
Hellam, Duane C IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771
Henry, Roy A PD
3231 South National
Springfield, MO 65807
417-663-7422
Herfkens, Kenneth D IM
1900 S National Ste 2200
Springfield, MO 65804
417-887-4000
Hill, Randy C OBG
1000 E. Primrose Ste 200
Springfield, MO 65807
417-887-0966
Hills, Joe F CD
1001 E. Primrose
Springfield, MO 65807
417-885-7200
Hinds, Paul A OBG
Rt 5 Box 532
Springfield, MO 65803
417-883-3015
Hoeman, Michael D IM
3443 S. National
Springfield, MO 65807
417-883-3443
Holand, Roy W ORS
1001 E. Primrose
Springfield, MO 65807
314-885-7110
Holland, Robt D PD
3231 South National
Springfield, MO 65807
417-883-7422
Hollis, Richard W AN
1900 South National #1800
Springfield, MO 65804
417-887-6323
Holmes, Danl E IM
3443 S. National
Springfield, MO 65807
417-883-3443
Holmes, David R OBG
3259 E. Sunshine Ste N
Springfield, MO 65804
417-881-1337
*Honderick, Richard T FP
1965 S. Fremont #2850
Springfield, MO 65804
417-881-4455
Hoos, Gary L ONC
1900 S. National Ste 3600
Sprinfield, MO 65804
417-662-4880
Horton, Bill G OPH
1900 S. National #1400
Springfield, MO 65804
417-887-5400
Horton, James D ORS
1235 E Delmar
Springfield, MO 65804
417-869-3041
Hover, Alexander R GE
3231 South National
Springfield, MO 65807
417-883-7422
Howitt, William J CP
440 Market
Springfield, MO 65806
417-865-5581
Hrnicek, Gary E IM
1000 E. Primrose Suite 540
Springfield, MO 65807
417-882-7252
Hubbard, Sally L FP
SMSU Student Health Center
901 S. National
Springfield, MO 65804
417-836-5540
Huewe, Douglas A D
1900 S. National
Suite 3800 NW
Springfield, MO 65804
417-882-2277
Hufft, Robert E Jr ORS
1900 S. National
#1950
Springfield, MO 65804
417-882-1900
Hulstra, Johannes F P
3231 South National
Springfield, MO 65807
417-883-7422
Husted, Frederick C IM
1001 E. Primrose
Springfield, MO 65807
417-885-7150
Ippensen, John H OTO
1965 S. Fremont Suite 1950
Springfield, MO 65804
417-887-5750
Ivy, H. B. OPH
435 E. Seminole
Springfield, MO 65807
417-886-9117
Jahanian, Iraj GP
1949 E. Sunshine Corp Centre
Bldg 2, Ste.111
Springfield, MO 65804
417-887-3006
Jameson, James E ORS
3535 E. Cinnamon Place
Springfield, MO 65809
417-883-6167
Janeczko, Gregory F AN
1900 South National #1800
Springfield, MO 65804
417-887-6323

Janssen, David L TR
3801 S. National
Springfield, MO 65807
417-885-6115
Jary, Mark L FP
1106 West Jackson
Ozark, MO 65721
417-485-3548
Jobe, Chas L IM
3231 South National
Springfield, MO 65807
417-883-7422
Johnson, Fritz M TS
1965 S. Fremont Ave.
Suite 1200
Springfield, MO 65804
417-687-5220
Johnson, Jeffrey R U
1965 S. Fremont Suite 3100
Springfield, MO 65804
417-862-0300
Johnson, Jos C Jr OBG
3231 S. National
Springfield, MO 65807
417-883-7422
Johnson, Robert D U
1965 S. Fremont #3100
Springfield, MO 65804
417-882-0300
Johnson, Warford B Sr IM
2244 East Edgewood
Springfield, MO 65804
417-881-1690
Johnson, Wm F U
1965 S. Fremont Suite 3100
Springfield, MO 65804
417-882-0300
Johnston, Jos L OBG
1900 S. National
Suite 2960 NW
Springfield, MO 65804
417-887-5500
Jones, Harold L IM
1001 E. Primrose
Springfield, MO 65807
417-885-7150
Jones, Laird E P
1740 S. Glenstone, Suite I/J
Springfield, MO 65804
417-881-8088
Josephson, Aaron M IM
1211 S, Glenstone
Springfield, MO 65804
417-866-7300
Kelling, E. Collyer DR
1675-J East Seminole
Springfield, MO 65804
417-661-5033
Kensel, Robert S EM
1423 N. Jefferson
Springfield, MO 65802
417-836-3193
Kesssinger, William A PD
3231 S. National Ave.
Springfield, MO 65807
417-883-7422
Key, James S D
1900 S. National #3900 NW
Springfield, MO 65804
417-882-2194
Khalil, Tamer G IM
3525 S. National Ste. 206
Springfield, MO 65807
417-883-6651
Kim, Jin Bai PM
1965 S. Fremont Ste. 3600
Springfield, MO 65804
314-887-0100
Kinder, Doyle O FP
3231 South National
Springfield, MO 65807
417-883-7422
Kipfer, Robt E GE
1001 Primrose
Springfield, MO 65807
417-885-7250
Kissell, Richard W IM
3443 S. National
Springfield, MO 65807
417-883-3443
Klingner, Geo M IM
P. O. Box 35
Turners, MO 65765
417-881-3602
Klinkerfuss, Geo H N
1000 E. Primrose Suite 310
Springfield, MO 65807
417-886-0005
Krabb, Henry F Jr GP
Rt 10 Box 140
Springfield, MO 65807
417-865-1464
Krabb, Kenneth E FP
1443 N. Robberson #700
Springfield, MO 65802
417-836-8100
Knowlton, Norman P III IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771
Kobbermann, Kobby J OBG
1965 S. Fremont Suite 2600
Springfield, MO 65804
417-882-2919
Kolze, Vernon W GS
633-C South Hickory
Springfield, MO 65809
417-881-7126
Krahn, Henry C R
1443 N. Robberson Ste. 208
Springfield, MO 65802
417-865-5521
Lampert, Benjamin A AN
1900 S. National #1800
Springfield, MO 65804
417-887-7458
LaFerriere, Keith A OTO
1965 S. Fremont, Suite 1950
Springfield, MO 65804
417-887-5750
Lewis, Noel R PTH
207 Professional Bldg.
Springfield, MO 65806
417-865-6656
LeFevre, Philip J P
1965 S. Fremont Suite 3000
Springfield, MO 65804
417-883-5141
Lin, Chi-Hsi N
3259-K East Sunshine
Springfield, MO 65804
417-883-8796
Litton, Lyle D DR
3044 Shalimar Drive
Springfield, MO 65804
417-881-1177
Lockhart, Charles E GS
609 Cherry St
224 Professional Bldg
Springfield, MO 65806
417-869-9139
Loeb, Richard H IM
3231 South National
Springfield, MO 65807
417-883-7422
*Logston, David G AN
3660 S. National Ste. 350
Springfield, MO 65807
417-881-0750
Lombardo, Richard J FP
3535 S. National
Springfield, MO 65807
417-882-1779
Long, Stephen E NM
1235 E. Cherokee Dept of NM
Springfield, MO 65804
417-885-3021
Lorenc, Ernest D
1900 S. National
Suite 3800 NW
Springfield, MO 65804
417-882-2277
Lowe, H. Arch Jr GS
1443 N Robberson #303
Springfield, MO 65802
417-866-7249
Ludwig, William D R
1443 N Robberson Suite 208
Springfield, MO 65802
417-865-5521
Lundman, Hugh GS
1965 S. Fremont #1300
Springfield, MO 65804
417-882-4800
Lurie, Harold H IM
3443 S. National
Springfield, MO 65807
417-883-3443

---

*Doctor of osteopathy.

Luzecky, Michael H N
1965 S. Fremont #2800
Springfield, MO 65804
417-861-5590

Lynch, Thos W D
1900 S. National #3100
Springfield, MO 65804
417-683-0500

Lyons, Daniel F IM
1965 S. Fremont #3200
Springfield, MO 65804
417-867-2050

*Magill, William S OBG
1900 S. National #2500
Springfield, MO 65804
417-886-8898

Maher, Robt W GS
924 E. Linwood Dr.
Springfield, MO 65807
417-862-1680

Major, Troy E D
1000 E. Primrose #340
Springfield, MO 65807
417-881-7220

Mantell, Jack M IM
1001 E. Primrose
Springfield, MO 65807
417-885-7270

Maple, Francis M GE
3231 South National
Springfield, MO 65807
417-883-7422

Mattax, James B Jr. OPH
1000 E. Primrose Suite 420
Springfield, MO 65807
417-886-2420

Mayus, Joseph I IM
1001 E. Primrose
Springfield, MO 65807
417-885-7120

McAfee, Gordon P
5335 S. Campbell Suite "A"
Springfield, MO 65810
417-887-7780

McAlhany, Howard J NS
1643 East Catalpa
Springfield, MO 65804
417-865-4578

McCorcle, Marcus D OBG
1000 E. Primrose, Suite 270
Springfield, MO 65807
417-882-6900

McCray, Glen M CHP
1324 S. Raintree Place
Springfield, MO 65809

McKinney, Daniel C PD
1965 S. Fremont Ste. 2200
Springfield, MO 65804
417-887-0711

McLaughlin, Richard D OBG
1000 E. Primrose, Suite 270
Springfield, MO 65807
417-882-6900

McMurray, Scott W ORS
3231 S. National
Springfield, MO 65807
417-883-7422

McNeal, Douglas M PD
3014J E. Sunshine
Springfield, MO 65804
417-887-0727

McQueary, Frederick G ORS
1900 S National
Suite 1980 NW
Springfield, MO 65804
417-882-6040

Mechlin, Norman J IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771

Mehlhorn, Gary L OPH
1965 S. Fremont Suite 2000
Springfield, MO 65804
417-887-1965

Meldi, Dominic M IM
3231 South National
Springfield, MO 65807
417-883-7422

Menchetti, Donald E FP
1630 N Jefferson Suite 3
Springfield, MO 65803
417-866-6619

Mendez, Maria A P
1965 S. Fremont Ste 1400
Springfield, MO 65804
417-881-8375

Mentgen, Carl N GE
1001 E. Primrose
Springfield, MO 65807
417-885-7250

Meyer, John W PD
3014G E Sunshine
Springfield, MO 65804
417-887-1504

Michaels, Robert H OPH
1900 S National
Suite 1400
Springfield, MO 65804
417-887-5400

Mihalevich, John A Jr IM
1900 S. National #3400
Springfield, MO 65804
417-887-7002

Miles, Wayne B A
1200 East Woodhurst
Bldg. K Ste 300
Springfield, MO 65804
417-887-1188

Milne, Jay L U
1900 S. National #2700
Springfield, MO 65804
417-887-2090

Mizell, Myron W CD
1965 S. Fremont Suite 2950
Springfield, MO 65804
417-882-1984

Mohsen, Aly M PM
1965 S. Fremont, Ste. 3600
Springfield, MO 65804
417-887-0100

Molberg, Peter J FP
1443 N. Robberson St. #803
Springfield, MO 65802
417-836-8787

Moore, De Armond OM
2306 Meadowview
Springfield, MO 65804
417-883-3572

Morgan, Charles H IM
3231 S. National
Springfield, MO 65804
417-883-7422

Morgan, John L DR
3525 S. National
Springfield, MO 65807
417-887-8790

Morrow, N. Eugene D
1900 S. National Ave.
Suite 3800 NW
Springfield, MO 65804
417-882-2277

Morton, Paul C IM
1608 Arlington Road
Springfield, MO 65807
417-881-7011

Moseley, F. Thomas GS
1965 S. Fremont #1300
Springfield, MO 65804
417-882-4800

Muegge, F. David IM
1000 E. Primrose #540
Springfield, MO 65807
417-862-7252

Neblett, Lewis M ENT
Rt. 2, Box 519
Rogersville, MO 65742
417-883-0779

Nelson, David E DR
1443 N. Robberson, Ste. 208
Springfield, MO 65802
417-865-5521

Nelson, Donald C IM
1900 S. National Suite 2200
Springfield, MO 65804
417-887-4000

Neu, Leo T III OPH
1000 E. Primrose Suite 420
Springfield, MO 65807
417-886-2420

Neu, Leo T Jr HEM
3231 S. National
Springfield, MO 65807
417-683-7422

Olson, E. Rule OPH
1900 S National Ste 1400
Springfield, MO 65804
417-887-5400

Olson, Robert J DR
3050 S. National #106
Springfield, MO 65804
417-883-8223

Otto, William J OBG
3231 S. National
Springfield, MO 65807
417-883-7422

Overend, Don S PD
3231 South National
Springfield, MO 65807
417-883-7422

Pacheco, Jose M R
5657 S. Roanoke
Springfield, MO 65810
417-887-6414

Palcheff, Chris L PD
1722-SS S. Glenstone
Springfield, MO 65804
417-881-6300

Park, Bert E NS
1965 S. Fremont Suite 3700
Springfield, MO 65804
417-887-6880

Park, Wm I Jr IM
1470 S. Virginia
Springfield, MO 65807
417-866-6614

Parsons, Clyde W III ORS
1900 S. National #1980 NW
Springfield, MO 65804
417-882-6040

Pearman, Carl C OBG
1443 North Robberson #803
Springfield, MO 65802
417-885-4191

Penninger, William H ORS
2246 E. Claiborne
Springfield, MO 65804
417-881-5646

Peterson, Craig A OPH
3231 S. National
Springfield, MO 65807
417-883-7422

Peterson, Stanley S IM
721 E. Stanford
Springfield, MO 65807
417-883-0371

Piker, K. Dewayne FP
1443 N. Robberson, Ste. 905
Springfield, MO 65802
417-836-3555

Pinckley, James N CD
3231 South National
Springfield, MO 65807
417-883-7422

Podrecca, Guido I PTH
2925 Chambery
Springfield, MO 65804
417-881-1957

Potts, Fred E III AN
3525 S. National Suite 110
Springfield, MO 65807
417-882-4605

Powell, Edwin M U
1965 S. Fremont Suite 3100
Springfield, MO 65804
417-882-0300

Powell, Kenneth R IM
1001 E. Primrose
Springfield, MO 65807
417-885-7280

Powell, Lisa G OBG
1900 S. National Ste 2960 NW
Springfield, MO 65804
417-867-5500

Prater, Bill G OPH
1965 S. Fremont Suite 2000
Springfield, MO 65804
417-887-1965

Prater, Kimberley A P
1443 No Robberson Suite 208
Springfield, MO 65802
417-865-5521

Prater, Thomas G OPH
1965 S. Fremont Suite 2000
Springfield, MO 65804
417-887-1965

Presley, Jimmy C FP
1301 S. Glenstone
Springfield, MO 65804
417-831-7399

Previti, Vincent GS
1965 S. Fremont Suite 2250
Springfield, MO 65804
417-881-3428

Pruett, Paul L OBG
Rt. 9 Box 425
Springfield, MO 65809
417-881-8613

Quinn, Paul S PTH
3801 S. National
Springfield, MO 65807
417-885-6094

Quinn, Rodney D N
1001 E. Primrose
Springfield, MO 65807
417-885-7360

Raborar, Arteso C CLP
207 Professional Bldg
Springfield, MO 65806
417-865-6656

Randolph, Kerry A IM
3443 S. National
Springfield, MO 65807
417-883-3443

Redmon, Conchita M IM
James Rice Clinic
720 W. Mt. Vernon
Nixa, MO 65714
417-725-4900

Reese, Jon A GS
3231 S. National
Springfield, MO 65807
417-883-7422

Reyes, Efraim FP
3405 Mt. Vernon St.
Springfield, MO 65802
417-865-5667

Reyes, Lirio M PD
3525 S. National #204
Springfield, MO 65807
417-683-2311

---

*Doctor of osteopathy.

Rice, Kathleen G PD
Children's Apnea Services
1235 E. Cherokee
Springfield, MO 65804
417-885-3106

Rising, Dean R PD
3231 South National
Springfield, MO 65807
417-883-7422

Robinson, Gary L OBG
1000 E. Primrose, Suite 200
Springfield, MO 65807
417-887-0966

Rogers, David B ORS
1900 S. National Ave. #1950
Springfield, MO 65804
417-882-1900

Rogers, James D CD
1965 S. Fremont Ave.
Suite 1200
Springfield, MO 65804
417-887-5220

Rogers, James T IM
1900 S. National Suite 3400
Springfield, MO 65804
417-887-7002

Rogers, Joseph Drewry TR
1900 S. National
Suite 1960 NW
Springfield, MO 65804
417-882-9960

Roselman, Michael J CD
1965 S. Fremont, Ste. 2950
Springfield, MO 65804
417-882-1984

Rosen, William K FP
1443 N. Robberson Ste 700
Springfield, MO 65802
417-836-8100

Ruff, Paul G CD
3231 South National
Springfield, MO 65807
417-883-7422

Russell, Earl D GP
1503 S Glenstone
Springfield, MO 65804
417-881-8593

Ryan, Robert A GP
309 Ashley Way Gl
Pharr, TX 78577

Sammon, T James PD
3014J E. Sunshine
Springfield, MO 65804
417-887-0727

Sanchez, Jon J ORS
3525 S. National Suite 210
Springfield, MO 65807
417-882-8437

Sauer, James M DR
1675-J E. Seminole
Springfield, MO 65804
417-881-5033

Sauer, Paul E CD
1000 E. Primrose Suite 330
Springfield, MO 65807
417-887-6866

*Scanlon, Robert C II U
Morton Building
1630 N. Jefferson
Springfield, MO 65803
417-865-0993

Schaeffer, Edward M OPH
2356 Wildwood Circle
Springfield, MO 65804
417-883-1073

Schane, Catherine L AN
2058 E. Briar
Springfield, MO 65804
417-886-0022

Schneider, J. Michael AN
1900 S. National Ste. 1800
Springfield, MO 65804
417-887-6323

Schoonmaker, Gene D
3231 S. National
Springfield, MO 65807
417-883-7422

Schreiber, Norman J GP
504 Longmeadow Cr.
St. Charles, IL 60174

Schroff, Carle E FP
1630 N Jefferson St
Springfield, MO 65803
417-866-6619

Schwartz, Eugene J PD
1315 E. Loren
Springfield, MO 65804
417-866-1464

Schwartz, Howard R RHU
1001 E. Primrose
Springfield, MO 65807
417-885-7130

Scott, Jamie A D
3231 S. National Ave.
Springfield, MO 65807
417-883-7422

Scott, Robert W IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771

Scott, Wendell J OPH
3231 S. National
Springfield, MO 65807
417-883-7422

Seagrave, Richard A ORS
3231 South National
Springfield, MO 65807
417-883-7422

Seale, Stuart A FP
1000 E. Primrose Suite 120
Springfield, MO 65807
417-882-8820

Shackter, Bruce I ORS
1001 E. Primrose
Springfield, MO 65807
417-885-7170

Shaeffer, James T ORS
1900 S. National Ste 1980 NW
Springfield, MO 65804
417-882-6040

Shane, Ramon A TS
1965 South Fremont Ave.
Suite 1200
Springfield, MO 65804
417-887-5220

Shapiro, A. James PD
1000 E. Primrose #350
Springfield, MO 65807
417-885-6350

Shealy, C. Norman NS
1328 E. Evergreen
Springfield, MO 65803
417-865-5940

Shelton, R. Wayne OPH
3231 South National
Springfield, MO 65807
417-883-7422

Shields, Lawrence S FP
SMSU Taylor Health Ctr
901 South National
Springfield, MO 65804
417-836-5540

Shultz, Thomas M OBG
1000 E. Primrose #270
Springfield, MO 65807
417-882-6900

Silsby, Harry D IM
1369 South Fairway Ave
Springfield, MO 65804
417-881-4756

Simpson, Albert P FP
1636 S. Glenstone
Springfield, MO 65804
417-881-6140

Slack, Melinda R NPM
1235 E. Cherokee
Springfield, MO 65804
417-885-3219

Smid, David M PTH
1000 E. Primrose #130
Springfield, MO 65807
417-885-6021

Snead, William H ORS
1900 S. National Ste 1980NW
North Wing - Suite 1980
Springfield, MO 65804
417-882-6040

Snow, Emasue P
1965 S. Fremont Ste 2960
Springfield, MO 65804
417-887-1192

Snow, Jon F OTO
1000 E. Primrose #360
Springfield, MO 65807
417-887-9900

Snyder, Christopher H Jr PD
1000 E. Primrose Suite 560
Springfield, MO 65807
417-882-1600

Spade, Diana J AN
1900 South National #1800
Springfield, MO 65804
417-887-6323

Spalding, David L OPH
1900 S. National
Ste. 1400
Springfield, MO 65804
417-887-5400

Sponenberg, Don D PD
3231 S. National
Springfield, MO 65807
417-883-7422

Stamatis, John J TS
1965 S. Fremont Ave.
Suite 1200
Springfield, MO 65804
417-887-5220

Stewart, Robt B OPH
1949 E. Sunshine #4-100
Springfield, MO 65804
417-887-6700

Stewart, Wendell FP
1965 S. Fremont Suite 2400
Springfield, MO 65804
417-886-0108

Stufflebam, Robt E IM
1900 S National
Suite 3400
Springfield, MO 65804
417-887-7002

Stuppy, Mark S OBG
1000 E. Primrose Suite 200
Springfield, MO 65807
417-887-0966

Sturtevant, Harwood N R
3935 E. Primrose
Springfield, MO 65809
417-881-7001

Sullivan, Dan T DR
3525 S. National #110
Springfield, MO 65807
417-887-8790

Sullivan, John A DR
1443 N. Robberson Suite 208
Springfield, MO 65802
417-865-5521

Sundaram, Shankar AN
1350 East Woodhurst
Springfield, MO 65804
417-887-5243

Sundaram, Vasantha K PD
1000 E. Primrose #180
Springfield, MO 65807
417-885-4023

Sundstrom, Frank D ORS
3525 S. National #210
Springfield, MO 65807
417-882-8437

Suva, Morfeo M IM
3525 S. National Ste. 111
Springfield, MO 65807
417-887-5519

Sweeney, Thos P DR
1675-J East Seminole
Springfield, MO 65804
417-881-5033

Sweet, Robert A END
1965 S. Fremont
Suite 3200
Springfield, MO 65804
417-887-2050

Tarrasch, Ernest L OPH
1636 S Glenstone
Springfield, MO 65804
417-881-4966

Taylor, William K IM
3231 S. National Ave.
Springfield, MO 65807
417-883-7422

Taylor, Wm E GP
350 John Q Hammons Pkwy
Springfield, MO 65806
417-831-3126

Tendai, Mark M OBG
1443 N. Robberson Ste. 505
Springfield, MO 65802
417-866-1988

Terry, James F U
1965 S. Fremont Suite 3100
Springfield, MO 65804
417-882-0300

Tesmer, Timothy A OTO
1965 S. Fremont Suite 1950
Springfield, MO 65804
417-887-5750

Thomasson, David D PD
1443 N. Robberson Ste. 508
Springfield, MO 65802
417-862-6606

Tombridge, Thos L PTH
1235 E Cherokee
St John's Hospital
Springfield, MO 65804
417-885-2000

Trotter, W. Yates IM
1900 S. National Ste 2200
Springfield, MO 65804
417-887-4000

Troxil, Elizabeth B PM
P.O. Box 4807
Springfield, MO 65808
417-864-6663

Tsang, John L NS
P.O.Box 3816
Springfield, MO 65808

Turner, Glenn O IM
1965 S. Fremont #3500
Springfield, MO 65804
417-887-1771

Vale, Janie R OM
3231 S. National Ave.
Springfield, MO 65807
417-885-0801

Van Osdol, Kelvin D CD
1965 S. Fremont #2950
Springfield, MO 65804
417-882-1984

Wachter, Ronald M PTH
1000 E. Primrose #130
Springfield, MO 65807
417-885-6021

Waddell, Kenneth E OBG
3231 S. National
Springfield, MO 65807
417-883-7422

---

*Doctor of osteopathy.

Wade, Larry A R
1900 S. National Suite 3300
Springfield, MO 65804
417-887-1984

Wakeman, J Newton Sr GS
1402 E. Meadowmere
Springfield, MO 65804
417-866-2277

Wakeman, Newt Jr ORS
1900 S National
Ste. 1700
Springfield, MO 65804
417-883-9300

Walker, Gary K OBG
1000 E. Primrose, Suite 270
Springfield, MO 65807
417-882-6900

Walker, Melvin O Jr. IM
1900 S. National Ste. 2950
Springfield, MO 65804
417-887-4000

Walker, William M OBG
1000 E. Primrose, Suite 270
Springfield, MO 65807
417-882-6900

Wall, Norman R RS
1443 N. Robberson
Ste. 901
Springfield, MO 65802
417-862-9556

Wantuck, Donald K IM
1900 S. National
Suite 3400
Springfield, MO 65804
417-887-7002

Warres, Herbert L U
2614 S. Inglewood
Springfield, MO 65804
417-883-3914

Waterfield, Jim R IM
3231 South National
Springfield, MO 65807
417-883-7422

Watson, Tom F AN
1900 S. National Suite 1800
Springfield, MO 65804
417-887-6323

Waxman, Joel E OTO
3231 S. National
Springfield, MO 65807
417-883-7422

Webb, James R U
1965 S. Fremont Ste 3100
Springfield, MO 65804
417-882-0300

Wheeler, Jeffery EM
Cox North 1423 N. Jefferson
Springfield, MO 65802
417-836-3193

White, R. Ned OBG
1443 N. Robberson, Ste. 301
Springfield, MO 65802
417-831-1512

Whitlock, C. Courtney NS
1443 N. Robberson, Ste 405
Springfield, MO 65802
417-862-0747

Wible, Jerry C OTO
3231 S. National
Springfield, MO 65807
417-883-7422

Wilkie, Robert G FR
Branson Medical Clinic, Inc.
548-B NO Business 65 Hy
Branson, MO 65616
417-335-4114

Williams, John W IV OBG
1000 E. Primrose, Suite 200
Springfield, MO 65807
417-887-0966

*Wilson, James W FR
3014-J E. Sunshine
Springfield, MO 65804
417-887-0727

Wilson, Roy E R
1900 S. National
Ste. 3300
Springfield, MO 65804
417-887-6538

*Wilson, W. Timothy FR
1965 S. Fremont Suite 2975
Springfield, MO 65804
417-883-0023

Winsky, Arlen D RS
1900 S. National Ste 2970
Springfield, MO 65804
417-887-8870

Wittmer, Marc R GS
1001 E. Primrose
Springfield, MO 65807
417-885-7240

Wittmer, Saml C GS
2056 E. Woodhaven Place
Springfield, MO 65804
417-881-6811

Wolf, Marion L ORS
3231 South National
Springfield, MO 65807
417-883-7422

Wolfe, James B OTO
1000 E. Primrose Ste 360
Springfield, MO 65807
417-887-9900

Wolfe, John E IM
1001 E. Primrose
Springfield, MO 65807
417-885-7160

Wong, George Jr. N
1900 S. National Suite 1900
Springfield, MO 65804
417-883-2514

Wooldridge, Wilfred E D
1126 E. Stanford
Springfield, MO 65807
417-881-8063

Wooten, Michael B GE
3231 South National
Springfield, MO 65807
417-883-7422

Wright, Andy J OBG
3231 South National
Springfield, MO 65807
417-883-7422

Wyrsch, Leo M OBG
1900 S. National Ste 2960 NW
Springfield, MO 65804
417-887-5500

Yancey, Daniel L ORS
1133 S. Weller
Springfield, MO 65804
417-869-1140

Zahn, Robt L RD
1965 S. Fremont Suite 2900
Springfield, MO 65804
417-887-8844

086—HENRY

Jones, Edna M OS
Rt #2
Deepwater, MO 64740
816-885-5585

Kenney, Douglas R FR
Medical Bldg.
Hospital Dr.
Clinton, MO 64735
816-885-8141

King, Richard H GS
Hospital Drive
Medical Clinic
Clinton, MO 64735
816-885-8141

Miller, Harry G ORS
Wetzel Clinic
HWY 13 North
Clinton, MO 64735
816-885-8171

Scott, Kenneth F FR
Medical Building
Hospital Drive
Clinton, MO 64735
816-885-8141

Smith, Wm J GR
103 W. Colt St.
Windsor, MO 65360
816-647-3117

Weltscheff, Christo A GR
Rt 1
Lincoln, MO 65338
816-547-3642

Wetzel, Gus S GS
Wetzel Clinic Hwy. 13 N.
Clinton, MO 64735
816-885-8171

102—JASPER

Abu-Libdeh, Ali J RHU
2631 Cunningham
Joplin, MO 64804
417-623-2600

Adams, Robert B IM
3103 Mc Clelland Blvd
Joplin, MO 64804
417-781-3100

Al-Shathir, Saad RM
P. O. Box 2161
2727 McClelland Blvd.
Joplin, MO 64803
417-782-4111

Allen, David O U
3105 Mc Clelland Blvd
Joplin, MO 64804
417-623-3703

Beene, Jackie S FR
1206 MacArthur Dr.
Webb City, MO 64870
417-673-5034

Bentlage, Charles H GS
1513 W 32nd St
Joplin, MO 64804
417-781-6844

Bettasso, Bernard F IM
2700 McClelland Blvd.
Suite 108 Bldg A
Joplin, MO 64804
417-624-8823

Bhend, David P R
3115 Mc Clelland Blvd
Joplin, MO 64804
417-781-6334

Bopp, J. Ronald OBG
3115 Mc Clelland Blvd
Joplin, MO 64804
417-781-6932

Borello, Dan J OBG
3101 Mc Clelland Blvd.
Joplin, MO 64804
417-624-1714

Brandon, Frederick M R
2609 E. 12th Street
Joplin, MO 64801
417-624-5882

Brigden, Robert B AN
2604 Picher
Joplin, MO 64804
417-623-1211

Burch, John E OBG
122 Moorings Park Dr.
Apartment 208
Naples, FL 33942
813-262-5274

Burleigh, Bruce W ORS
Joplin Orthopaedic Surg Inc.
P. O. Box 2507
Joplin, MO 64803
417-781-2807

Carnes, Victor M RTH
2700 Mc Clelland
Suite 205 Bldg. B
Joplin, MO 64804
417-623-6330

Carter, Robert L HEM
2727 Mc Clelland
Joplin, MO 64804
417-782-6118

Chandramohan, Nanjappa IM
616 W. Centennial
Carthage, MO 64836
417-358-4680

Chapman, Ramona Marie ONC
P. O. Box 2644
3302 Mc Intosh Circle
Joplin, MO 64803
417-782-6630

Chase, Ned B ORS
Joplin Orthopaedic Surg Inc.
P. O. Box 2507
Joplin, MO 64803
417-781-2807

Chellappa, Danu IM
Suite 215 2817 Mc Clelland
Joplin, MO 64804
417-781-9197

Chesney, George W AN
2604 Picher St
Joplin, MO 64804
417-623-1211

Clark, Larry K OBG
3101 McClelland Blvd.
Joplin, MO 64804
417-624-1714

Cohle, Richard R IM
Rt 5, Box 381
Carthage, MO 64836
417-358-4763

Conde, Gary A FR
2601 Cunningham Lower Level
Joplin, MO 64804
417-781-0836

Corcoran, Francis H CD
P. O. Box 2788
2817 McClelland Blvd.
Joplin, MO 64803
417-781-5387

Cotner, Mark S GS
1002 McIntosh Circle Ste 6
Joplin, MO 64804
417-782-7090

Crispell, Lawrence S OTO
1512 Pelican Point Dr. 264
Sarasota, FL 34231

Crosby, William H ONC
3302 McIntosh Circle
Joplin, MO 64804
417-782-6630

*Dagen, Daniel L N
2700 McClelland
Building B Suite 203
Joplin, MO 64804
417-782-1483

Dandridge, Walter C GS
2601 Cunningham
Joplin, MO 64804
417-781-4404

---

*Doctor of osteopathy

Daus, Arthur S NS
2902 B McClelland Blvd.
Joplin, MO 64804
417-781-4733
Davis, Charles S CD
115 W. 16th
Galena, KS 66739
316-783-5348
*Deffenbaugh, Larry D IM
Rt. 2, Box 2461
Carthage, MO 64836
417-782-4701
Dement, Oman E OBG
1002 McIntosh Circle Dr. #4
Joplin, MO 64804
417-782-1271
DeTar, Burleigh E GP
P.O.Box 2368
Joplin, MO 64803
417-623-4862
Dixon, Herbert K OPH
3201 Mc Intosh Circle Dr.
Joplin, MO 64804
417-624-8390
Doody, Patrick T NEP
1 Emerald Drive
Joplin, MO 64804
417-782-5000
Esch, John G ORS
Joplin Orthopaedic Surg Inc.
P. O. Box 2507
Joplin, MO 64803
417-781-2807
Esther, John R PTH
2700 Mc Clelland
Suite 205 Bldg. B
Joplin, MO 64804
417-623-6330
Ferguson, Robt M GP
508 East 32nd Street
Joplin, MO 64804
417-781-5220
Fritsch, Andrew J IM
2525 Jackson St
Joplin, MO 64804
417-623-1333
Frogge, Jim D U
3105 Mc Clelland Blvd.
Joplin, MO 64804
417-623-3703
Gardner, Joe A OBG
2700 McClelland Blvd.
Bldg C. Suite 303
Joplin, MO 64804
417-782-2660
Gavankar, Sharad S P
2606 Cunningham St.
Joplin, MO 64804
417-623-1415
Goff, John E FP
2601 Cunningham
Lower Level
Joplin, MO 64804
417-782-3600
Graham, Joseph M CDS
2817 Mc Clelland
Suite 211
Joplin, MO 64804
417-782-2190
Grebe, T. Keith OBG
1221 Mc Intosh Circle
Joplin, MO 64804
417-624-1711
Grim, Edward M U
3105 Mc Clelland Blvd
Joplin, MO 64804
417-623-3703
Habermann, James H PTH
2700 McClelland Bldg B 205
Joplin, MO 64804
417-623-6330
Hallaba, M. A. S. GS
1031 McIntosh Circle Drive
Joplin, MO 64804
417-782-1110
Hari, Magaral S AN
2902 B. Mc Clelland Blvd.
Suite 10
Joplin, MO 64804
417-781-6661
Harrison, Phil W IM
1001 McIntosh Circle Dr.
Joplin, MO 64804
417-623-5250
Hatlelid, R. Robert NEP
1800 W. 30th Street
Joplin, MO 64804
417-782-5000

Hilton, Paul E D
2700 Mc Clelland Bldg A 107
Joplin, MO 64804
417-624-1331
Huff, Kalaichelvi R AN
2902 B McClelland Blvd.
Suite 10
Joplin, MO 64804
417-781-6661

Hurst, Wilfred W ORS
1916 Murphy Blvd.
Joplin, MO 64803
417-624-6620
Jones, Jeffrey T OBG
2700 McClelland Suite 304
Joplin, MO 64804
417-782-1600
Jones, Paul S DR
1722 W. 27th P.O. Box 2009
Joplin, MO 64803
417-624-5882
*Jordan, Earl L Jr OPH
702 East 34th St.
Joplin, MO 64804
417-781-0044
Judge, Mark A OPH
2401 Jackson Ave.
Joplin, MO 64804
417-781-3630
Kessler, William D Jr. FP
2700 McClelland Blvd
Bldg B Suite 204
Joplin, MO 64804
417-782-6767
Knop, Kevin F AN
2902 B McClelland Blvd.
Suite 10
Joplin, MO 64804
Levanvo, William IM
1329 E. 32nd St. #3
Joplin, MO 64804
417-623-1362
Loesch, J. John AN
1329 E. 32nd St. Box 3353
Joplin, MO 64803
417-623-2526
*Long, Chester I IM
2700 Mc Clelland Blvd.
Bldg B Suite 209
Joplin, MO 64804
417-782-4601
Maclaughlin, James C IM
3103 Mc Clelland Blvd
Joplin, MO 64804
417-781-3100
Majzoub, Hish S NS
2902 B Mc Clelland Suite 7
P. O. Box 2602
Joplin, MO 64803
417-781-4733
Mangalat, Narayanan K CDS
2817 McClelland Blvd.
Suite 205
Joplin, MO 64804
417-781-1714
Manire, John E EM
3922 Collegeview Dr.
Joplin, MO 64801
417-781-2727
Martin, Clarence A GS
1513 W 32nd
Joplin, MO 64804
417-623-6114
McDonald, Margaret E PTH
2700 McClelland Bldg B-205
Joplin, MO 64804
417-623-6330
McDonald, Michael G AN
2902 B McClelland Suite 10
Joplin, MO 64804
417-781-6661
McGonigle, James P OPH
2630 Cunningham
Joplin, MO 64804
417-781-6330
McGonigle, Michael M OTO
2620 Cunningham
Joplin, MO 64804
417-781-4613
Mehaffy, Orville A FP
2817 McClelland Blvd.
Suite 108
Joplin, MO 64804
417-782-6600
Meredith, William R OPH
2817 McClelland Suite 120
Joplin, MO 64804
417-782-1333
Montgomery, John H III EM
2727 McClelland Blvd.
Joplin, MO 64804
417-781-2727
Moore, Thomas B CD
P. O. Box 2788
2817 McClelland
Joplin, MO 64803
417-781-5387
Mueller, Adolph R ORS
Joplin Orthopaedic Surg. Inc
P.O. Box 2507
Joplin, MO 64803
417-781-2807
Nagle, Michael G GS
2700 McClelland Blvd. B-201
Joplin, MO 64804
417-623-1131

Newman, William R PD
P.O. Box 2474
3333 Mc Intosh Circle 6
Joplin, MO 64803
417-782-8830
Nickell, Michael D IM
P.O. Box 2708
1001 McIntosh Circle
Joplin, MO 64803
417-781-7110
O'Keefe, Timothy FP
2700 McClelland Suite 204
Joplin, MO 64804
417-782-6767
Patterson, Donald R FP
2700 McClelland Blvd. #C-309
Joplin, MO 64804
417-624-1520
Patterson, Grover S FP
1727 River St
Carthage, MO 64836
417-358-2358
Pottenger, L. Kenneth DR
P. O. Box 2009
1722 W. 27th
Joplin, MO 64803
417-624-5882
Pryor, Ira Joe AN
2902B McClelland Blvd.
Suite 10
Joplin, MO 64804
417-781-6661
Putnam, John L ORS
2700 McClelland Blvd.
Joplin, MO 64804
417-781-2807
*Rankin, Wendell D IM
P. O. Box 2624
702 E. 34th
Joplin, MO 64803
417-624-1432
Reddy, Vodur C U
2700 Mc Clelland Blvd.
Bldg B Suite 214
Joplin, MO 64804
417-782-0045
Roberts, Howard H GYN
3101 McClelland
Joplin, MO 64804
417-624-1714
Royce, James J GP
16th And Miner Sts.
Sarcoxie, MO 64862
417-548-3334
Saab, Ghaleb A IM
Chapman Reg Cancer Center
3302 McIntosh Circle
Joplin, MO 64803
417-782-6630
Sabapathy, Shawn CD
2817 Mc Clelland Suite 225
Joplin, MO 64804
417-781-4260
Saneman, Paul P OBG
2700 McClelland Blvd
Bldg C Suite 306
Joplin, MO 64804
417-781-4530
Scacewater, Rick PUD
2700 Mc Clelland Blvd.
Bldg B Suite 216
Joplin, MO 64804
417-782-8350
*Schoenfeld, Roger H U
P. O. Box 2220
702 E. 34th
Joplin, MO 64803
417-781-7220
Shagets, Frank W OTO
2700 McClelland Blvd. #C305
Joplin, MO 64804
417-623-5111
Shah, Ramesh R OPH
2902 B McClelland Blvd.
Suite 8
Joplin, MO 64804
417-781-2616
Shanahan, Mary P OBG
2530 Maiden Lane
Joplin, MO 64804
417-623-6525
Sherrod, Duane W PS
3333 McIntosh Circle Ste. 3
Joplin, MO 64804
417-782-3100
Simmons, Jess S D
2700 McClelland Blvd
Bldg A Suite 107
Joplin, MO 64804
417-624-1331
Singleton, Marvin A OTO
3401 McIntosh Circle
Joplin, MO 64804
417-781-2040
Skelley, Mark J ONC
2727 Mc Clelland
Joplin, MO 64804
417-782-6118

---

*Doctor of osteopathy.

Smith, Dennis W IM
2700 Mc Clelland
Bldg B Suite 215
Joplin, MO 64804
417-623-5610

Smith, Roland T GS
1444 Crestwood
Joplin, MO 64801
417-624-4811

Smith, W. Russell GS
315 Euclid
Carthage, MO 64836
417-358-2911

St. John, Donald R EM
1011 S. Stonehaven
Marshall, MO 65340
816-886-5780

Stidman, Frederick C PD
3107 Mc Clelland Blvd
Joplin, MO 64804
417-781-3121

Stinnett, D. Mitchell CD
2817 Mc Clelland Blvd.
Suite 211
Joplin, MO 64804
417-782-2190

Straub, David L A
2902 McClelland Blvd. #2
Joplin, MO 64804
417-782-1343

Subramanian, S. IM
1429 Hazel
Carthage, MO 64836
417-358-8900

Teeter, Brian H IM
3333 McIntosh Circle Dr. #1
Joplin, MO 64804
417-781-2101

Turfboer, Robert P
P. O. Box 3327
Joplin, MO 64803

*Venter, John L IM
3402 McIntosh Circle
Joplin, MO 64804
417-623-7005

Vinyard, Jack L GP
2329 Jackson
Joplin, MO 64804
417-781-1132

Ward, Mark FP
Rt. 8, Box 339
Neosho, MO 64850
417-451-4100

*Webb, James J AN
2902B McClelland Suite 10
Joplin, MO 64804
417-781-6661

*Weiss, Randy B R
P. O. Box 2249
2000 Maiden Lane
Joplin, MO 64803
417-782-4100

White, Nelson P FP
Rt. 7 Box 28B
Neosho, MO 64850
417-451-2060

Whitten, M. Foster GS
Rt 4
Carthage, MO 64836
417-358-4594

Wilcox, Ruth E PD
714 W. 25th St.
Joplin, MO 64804
417-623-6563

Willcoxon, Robert L GS
2601 Cunningham
Joplin, MO 64804
417-781-4404

Wilson, Alice H FP
Rt. 1 Box 163
Neosho, MO 64850
417-624-7229

Yuhas, John A OPH
2401 Jackson
Joplin, MO 64804
417-781-3630

106—JEFFERSON

Albano, Benj I GS
P O Box 380
Crystal City, MO 63019
314-937-8642

Allbee, Roger H GS
44 Boyce Lane
Festus, MO 63028

Ashcraft, Walter C TS
2310 Truman Blvd.
P.O. Box 199
Crystal City, MO 63019
314-937-1585

Bai, Samuel S CD
107 Walnut St
Festus, MO 63028
314-937-2116

Belen, Marietta PD
County Wide Pediatrics Inc.
103 North Mill St.
Festus, MO 63028
314-937-0707

Blank, Michael K GS
P.O. Box 507
De Soto, MO 63020
314-586-2226

Britt, Cornelius L ORS
400-B S. Truman Blvd.
Crystal City, MO 63019
314-937-4041

Chanduwadia, Dossu J OBG
815 E. Main
Flat River, MO 63601
314-586-8958

Charles, Nallathambi FP
P.O. Box 69
Festus, MO 63028
314-937-9199

Deleste, Carlos J U
426 Main
Festus, MO 63028
314-937-9199

Donnell, Harold E FP
700 N Main
De Soto, MO 63020
314-586-2213

Donnell, Robt H DR
113 Crystal Heights Rd
Post Office Box 230
Crystal City, MO 63019
314-937-4641

Elterman, Joseph J IM
Box 186
Crystal City, MO 63019
314-937-9336

Foy, Thomas M PD
P.O. Drawer 8
Barnhardt, MO 63012
314-464-3266

Houttuin, Erik U
Jefferson Urological, Inc.
Rt 4, Industrial Dr.
Festus, MO 63028
314-937-8883

Jamaluddin, Mohideen A IM
420 Main St.
Festus, MO 63028
314-937-9199

Johnson, Gordon L PTH
Jefferson Memorial Hospital
Festus, MO 63028
314-933-1620

Jordan, Timothy J PD
108 Bonnie Lane
Festus, MO 63028
314-937-0326

Judge, Walter T GS
1004 Taylor Ave
Crystal City, MO 63019
314-937-3246

Junker, James A DR
16 Fox Meadows
St. Louis, MO 63127
314-843-0071

Kim, Tae S GS
P. O. Box 408
Crystal City, MO 63019
314-937-6601

Lee, Jung H CD
P. O. Box 309
Crystal City, MO 63019
314-937-0817

Maranan, Diosdado L EM
3895 Jeffco Blvd.
Arnold, MO 63010
314-464-5474

Patel, Indu B IM
1683 Marriott Lane
P.O.Box 308
Barnhart, MO 63012
314-464-7032

Reed, Martha A IM
11318 Highway 21
Hillsboro, MO 63050
314-586-6820

Shaplin, Alfred D DR
12668 Westport Dr.
St. Louis, MO 63146

Snidle, William F OBG
2320 Jefferson Medical Plaza
Crystal City, MO 63019
314-937-1545

Verzola, Eufemio G GS
1004 Industrial Dr.
Herculaneum, MO 63048
314-937-8675

Yoo, Chong-Sup P
204 South Second St.
Festus, MO 63028
314-937-1704

110—JOHNSON

Cooper, Robt L GP
P.O. Box 458
Warrensburg, MO 64093
816-747-6162

Cooper, Robt L II OBG
P.O.Box 458
Warrensburg, MO 64093
816-747-6162

Dyer, Curtis W FP
220 E. Culton
Warrensburg, MO 64093
816-747-5114

Folkner, Albert L GP
222 E. Culton St.
Warrensburg, MO 64093
816-747-5114

Glover, David FP
220 E. Culton
Warrensburg, MO 64093
816-747-5114

Gonzalez, Mario G R
502 Burkarth Box 757
Warrensburg, MO 64093
816-747-8415

Hanna, Hugh A GS
Route 7
South Mitchell St.
Warrensburg, MO 64093

Johnson, Chas S IM
P. O. Box 8
Warrensburg, MO 64093

Jones, Keith D FP
Rt. 2, Burkarth Rd.
Warrensburg, MO 64093
816-747-9156

Lederer, Chas M Sr FP
617 Clark
Warrensburg, MO 64093
816-747-5711

Maxson, Theodore R A
220 E Culton
Warrensburg, MO 64093
816-747-5114

Sicat, Alfonso V ORS
510 E Gay
Warrensburg, MO 64093
816-747-8161

Watts, Craig M R
Western Mo Medical Center
Burkharth Rd.
Warrensburg, MO 64093
816-747-3181

*Wescott, Thomas P FP
217 S. Market
Holden, MO 64040
816-732-4311

115—LACLEDE

Bealer, Louis A GS
732 S Madison
Lebanon, MO 65536
417-532-9161

Carrington, Howard W GP
P. O. Box 1142
Lebanon, MO 65536
417-532-6151

118—LAFAYETTE-RAY

Baldwin, Theodore R GP
1236 Jesse James Rd
Excelsior Spgs., MO 64024
816-637-5561

Boydston, Catherine O FP
107 S 2nd St
Odessa, MO 64076
816-633-5511

Boydston, Wyatt W FP
107 S 2nd St
Odessa, MO 64076
816-633-5511

Brady, Hugh S GP
RR 1
Concordia, MO 64020
816-463-2630

Cook, Thos B GP
4 Dunns Lane
Richmond, MO 64085
816-776-2201

Cope, Jos S GS
12940 Wornall
Kansas City, MO 64145

Davault, Geo K GP
Medical Center
Richmond, MO 64085
816-776-2201

Kuangparichat, Manoch IM
1205 N. Jesse James Rd.
Excelsior Spgs., MO 64024

---

*Doctor of osteopathy.

Lai, Hsien-Ell GP
505 W. 34th
Higginsville, MO 64037
816-584-3720

Latif, Azhar IM
1026 Main
Lexington, MO 64067
816-259-2216

LaHue, William C GS
1026 Main
Lexington, MO 64067
816-259-2216

Levine, Myron A OBG
1124 Franklin
Lexington, MO 64067
816-259-4601

McFadden, Gene A GP
Waverly Clinic
Waverly, MO 64096
816-493-2262

Meyer, Jerry L FP
905 Main St
Concordia, MO 64020
816-463-7966

Miller, Burney A FP
215 W. Dryden
Odessa, MO 64076
816-633-7525

Nguyen, Lan K GS
Waverly Clinic Inc.
P.O. Box 169
Waverly, MO 64096
816-493-2262

Pavlu, Robert R GP
Waverly Clinic
Waverly, MO 64096
816-493-2262

Qadir, Abdul PD
1026 Main St.
Lexington, MO 64067
816-259-2216

Riley, Chas T FP
220 Highway 13 South
Richmond, MO 64085
816-776-6945

Scowley, John E GP
803 E. Main
Richmond, MO 64085
816-776-2201

Tobin, Marla J FP
P. O. Box 756
Higginsville, MO 64037
816-584-7737

Vajaranant, Manit OBG
1026 Main
Lexington, MO 64067
816-259-2216

Ward, Joe W GP
1004 Francis
Lexington, MO 64067
816-259-3284

120—LAKE OF THE OZARKS

Buehler, Carl T Jr GP
6 S Maple St
Eldon, MO 65026

Dickerson, William J IM
Rt. 1, Box 188-29
Osage Beach, MO 65065
314-348-2723

Fotopoulos, Chris K GS
P O Box 128
Osage Beach, MO 65065
314-348-3060

Francis, Roger A DR
Lake of the Ozarks Gen Hosp.
Osage Beach, MO 65065
314-348-3181

*Galdamez, John T IM
Lake of the Ozarks Gen Hosp
Osage Beach, MO 65065
314-348-3342

Garrett, Thomas H EM
P. O. Box 187CB
Osage Beach, MO 65065
314-348-3181

Garrison, Theodore W GP
P O Box 356
Camdenton, MO 65020
314-348-3181

Gunn, Jack GP
P. O. Box 160
Versailles, MO 65084
314-378-4666

Hayden, Melvin R GP
Hayden Medical Services LTD
P. O. Box 1140
Camdenton, MO 65020
314-346-5624

*Heim, J. Marcus ORS
Rt. 1, Box 27 A
Osage Beach, MO 65065
314-348-3447

Holley, Donald B GP
Hayden Medical Services LTD
P. O. Box 1140
Camdenton, MO 65020
314-346-5624

Kauffman, Ruth GP
P. O. Box 160
Versailles, MO 65084
314-378-4666

Lischwe, Timothy D OPH
P. O. Box 187 CB
Osage Beach, MO 65065
314-348-8002

Lyle, Robt R GP
P. O. Box 160
Versailles, MO 65084
314-378-4666

O'Connor, Edward F OPH
P. O. Box 277
Versailles, MO 65084
314-378-5269

Pelegrin, Robert J U
P. O. Box 1120
Osage Beach, MO 65065
314-348-2345

Petit, Carl A GS
LOGH Hosp Bldg #101
Osage Beach, MO 65065
314-348-3060

Smeltzer, Frederick M R
Lake of the Ozarks Hosp.
Osage Beach, MO 65065
314-348-3181

Tietjen, Fred O ORS
P. O. Box 187
Osage Beach, MO 65065
314-348-3181

Washburn, John L GP
P. O. Box 109, Bank Bldg.
Versailles, MO 65084
314-348-4203

125—METRO MED

Aaron, Geo U
5840 Mission Drive
Shawnee Mission, KS 66208

Abdou, Nancy L HEM
Suite T101
6420 Prospect
Kansas City, MO 64132
816-363-4100

Abella, Ben Zulueta Z GS
416 Main
Belton, MO 64012
816-331-4315

Abend, Melvin N PS
848 W. 52nd Terrace
Kansas City, MO 64112

Abercrombie, Keith J U
1010 Carondelet Dr Suite 210
Kansas City, MO 64114
816-942-4243

Abrams, Bernard M N
Ste 400 Highlands Prof Tower
6724 Troost
Kansas City, MO 64131
816-444-4082

Adelman, Arthur GS
6305 Aberdeen
Shawnee Mission, KS 66208
816-333-2000

Adelman, Bruce T AN
1000 E. 50th St. Suite 340
Kansas City, MO 64110
816-333-7484

Adler, Federico ORS
6724 Troost Ave #300
Kansas City, MO 64131
816-363-6500

Agee, L. Glenn FP
10000 Hemlock Dr.
Overland Park, KS 66212
913-341-0354

Ahuja, Suraj P CD
Rockhill Cardiology Group
6650 Troost - Suite 106
Kansas City, MO 64131
816-444-7444

Akin, C. David CD
1515 W. Truman Rd. Suite 408
Independence, MO 64050
816-461-6837

Alberg, Marvin R OM
3525 N W 60th Terrace
Kansas City, MO 64151
816-741-5239

Alderman, Donald P AN
1000 E. 50th St. Suite 340
Kansas City, MO 64110

Alfie, Salomon CHP
7301 Mission Rd. #328
Shawnee Mission, KS 66208
816-362-1444

Ali, Mohammed E AN
2400 R. D. Mize Rd., Suite 1
Independence, MO 64057
816-373-0263

Allebach, Hobart K PTH
3020 W. 84th Place
Shawnee Mission, KS 66206

Allen, Arthur A II N
8800 W. 75th St. Suite 100
Shawnee Mission, KS 66204

Allen, Mark J GE
4320 Wornall Rd. Suite 332
Kansas City, MO 64111
816-561-2000

Allen, Robt E GS
332 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-931-2393

Allen, Thomas P IM
6675 Holmes Suite 440
Kansas City, MO 64131
816-363-5662

Allphin, Barbara J PD
Childrens Mercy Hosp
24th & Gillham Rd
Kansas City, MO 64108
816-234-3050

Alsop, Webb S Jr. AN
3604 W 53rd Street
Shawnee Mission, KS 66205
913-262-1540

Altomare, Edward P AN
1030 W 65th St
Kansas City, MO 64113
816-444-8667

Ames, Mary B N
2318 Lovers Lane
St. Joseph, MO 64505

Amini, Jafar DR
2709 W. 119th St.
Shawnee Mission, KS 66209
913-642-6559

Ammatelli, Francis J IM
412 Carondelet Med. Bldg.
1010 Carondelet Dr
Kansas City, MO 64114
816-942-8558

Amoury, Raymond A PDS
Childrens Mercy Hospital
24th & Gillham Rd
Kansas City, MO 64108
816-234-3575

Anderson, John V NPM
Children's Mercy Hosp.
24th and Gillham Rd
Kansas City, MO 64108
816-234-3593

Anderson, Raymond B PD
Children's Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3666

Anderson, Sue K NEP
2508 W. 71st St.
Prairie Village, KS 66208
913-236-7822

Andes, Elizabeth A IM
1515 W. Truman Rd. Suite 302
Independence, MO 64050
816-252-9002

Andrus, Bailey C PD
3208 W. 81st Terrace
Leawood, KS 66206

Anthony, James P DR
3807 West 171st St
Stilwell, KS 66085
913-897-2149

Arbab, Ali A GS
6650 Troost Suite 109
6650 Troost
Kansas City, MO 64131
816-444-0905

Arms, Arnold V IM
11209 Granada
Shawnee Mission, KS 66211
913-491-3019

Arms, Richard A IM
St. Luke's Lenexa Clinic
8704 Bourgade
Lenexa, KS 66219

Arnold, John D IM
5801 Howe Drive
Fairway, KS 66205

Arnold, Lowry K PTH
St. Mary's Hosp -B.S.
201 W. R.D. Mize Rd.
Blue Springs, MO 64015
816-753-5700

Arribas, Aurora I GP
Richard Cabot Clinic
1810 Summit
Kansas City, MO 64108

Arribas, Romeo F GS
1316 W. 40 Highway
Blue Springs, MO 64015
816-229-9125

---

*Doctor of osteopathy.

Arrighi, David A GS
2301 Holmes
Kansas City, MO 64108
816-556-3505

Ashby, Jennifer D D
2900 Baltimore Suite 500
Kansas City, MO 64108
816-753-1900

Ashcraft, Keith W PDS
509 Broadway Med Bldg
4400 Broadway
Kansas City, MO 64111
816-931-5538

Ashley, Lillard G Jr. CD
930 Carondelet Dr. Ste 201
Kansas City, MO 64114

Atwell, Floyd C OBG
6332 Reeds Drive
Shawnee Mission, KS 66202
913-432-4188

Austin, George M U
1515 W. Truman Rd.
Suite 404
Independence, MO 64050
816-836-8831

Averill, Keith H CD
2840 Verona Rd.
Mission Hills, KS 66208

Backstrom, Jay T IM
Samuel U. Rodgers Hlt Ctr
825 Euclid Ave.
Kansas City, MO 64124
816-474-4920

Baer, Alvin J OPH
5800 Howe Dr.
Shawnee Mission, KS 66205
913-362-3560

Baker, Philip J FP
9205 E. 40 Highway
Independence, MO 64055
816-737-1505

Ballard, V. Bryce IM
6618 Rainbow Rd.
Shawnee Mission, KS 66208

Bankuti, Ferenc R
310 Research Med Off Bldg
6400 Prospect
Kansas City, MO 64132
816-523-2400

Bare, Chester I Jr. PD
Raytown Clinic
9406 E. 63rd
Kansas City, MO 64133
816-356-1060

Barelli, Pat A OTO
5609 Mission Drive
Shawnee Mission, KS 66208

Barloon, James H OBG
Prime Health
9150 E. 41st Terrace
Kansas City, MO 64133
816-356-3000

Barnard, John L Jr. ORS
4315 Rockhill Rd.
Kansas City, MO 64110
816-931-2406

Barnett, Gordon P GP
6568 High Dr
Shawnee Mission, KS 66208
913-362-8226

Barnthouse, Cris D ORS
Corporate Woods Bldg 12
10975 Benson Suite 300
Overland Park, KS 66210
913-339-6699

Barr, Glenn A GS
520 E. 63rd St.
Kansas City, MO 64110
816-361-2800

Barr, W. Kent CD
2929 Baltimore, Suite 415
Kansas City, MO 64108
816-756-0695

Barry, Wm B OTO
422 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-931-3296

Barter, Bruce PD
9150 East 41st Terr.
Kansas City, MO 64133
816-356-5000

Barton, Jean C PD
3429 Coleman Rd.
Kansas City, MO 64111
816-561-2180

Basantz, F. Victor FP
Hickman Mills Clinic Inc.
11201 Colorado
Kansas City, MO 64137
816-763-5200

Baska, Richard E CHN
Children's Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108

Bass, Walter R OPH
9500 E 63rd St Suite 109
Raytown, MO 64133
816-353-7331

Bateman, Timothy M IM
Medical Plaza II, Ste 20
4320 Wornall Rd.
Kansas City, MO 64111
816-931-1883

Batts, Barbara A OBG
1010 Carondelet Dr.
Suite 328
Kansas City, MO 64114
816-941-0700

Bauer, Lafe W AN
4818 W 80th
Prairie Village, KS 66208
913-642-5369

Baum, Frank E OBG
11706 Washington
Kansas City, MO 64114
816-942-0426

Bauman, Alan E OPH
2928 Main St. Suite 130
Kansas City, MO 64108
816-756-1236

Bay, Merrill R OM
301 S. Woods Chapel Rd
Blue Springs, MO 64015
816-228-5510

Bayer, William L HEM
4040 Main
Kansas City, MO 64111
816-753-4040

Beall, McPherson S Jr. ORS
1010 Carondelet Dr. #426
Kansas City, MO 64114
816-941-0200

Beatty, Eugene C PTH
Children's Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3234

Beatty, Nina D AN
Truman Medical Ctr
2301 Holmes
Kansas City, MO 64108
816-556-3218

Beatty, Robert M NS
Suite 328 4320 Wornall Rd.
Kansas City, MO 64111
816-931-1150

Beauchamp, Gary D CD
Suite 40 11 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-5510

Beck, Calvin E U
300 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-561-7612

Becker, Rolfe A OPH
804 Highlands Prof Tower
6724 Troost Ave.
Kansas City, MO 64131
816-363-3363

Beeks, John W OM
720 Oak Street
Kansas City, MO 64106
816-842-1146

Behrends, Steven H GS
1010 Carondelet Suite 320
Kansas City, MO 64114
816-942-8250

Bell, Hubert H CD
Suite 40 II Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
815-531-5510

Bell, Wm F FP
615 West 3rd Street
Lee's Summit, MO 64063
816-524-3799

Beller, Thomas A PUD
6420 Prospect Suite T303
Kansas City, MO 64132
816-333-1919

Bender, Joan C PD
Children's Mercy Hospital
24th at Gillham Rd.
Kansas City, MO 64108
816-234-3370

Bennett, Danny L PS
4177 Broadway
Kansas City, MO 64111
816-561-1414

Bennett, Desiree N IM
Samuel U. Rodgers Hlt Ctr
825 Euclid
Kansas City, MO 64124
816-474-4920

Bennett, James D IM
4315 W. 111th Terrace
Leawood, KS 66211

Benoit, Hector W Jr. TS
7919 Pawnee
Shawnee Mission, KS 66208

Benson, William F ORS
720 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-753-5102

Bernhardt, Gary D FP
13013 Fuller Ave. Suite B
Grandview, MO 64030
816-761-1660

Berry, Maxwell G IM
32 Compton Court
Shawnee Mission, KS 66208

Bettinger, Irene E N
4320 Wornall Rd. Suite 220
Kansas City, MO 64111
816-531-4510

Biber, Robert J U
1515 W. Truman Rd. Suite 404
Independence, MO 64050
816-836-8831

Bickley, James E OBG
328 Carondelet Med. Bldg.
1010 Carondelet Dr
Kansas City, MO 64114
816-941-0700

Bidwell, Robt E P
4320 Wornall Rd Ste 704
Kansas City, MO 64111
816-561-2524

Biery, Richard M PH
K C Mo Health Dept
414 E 12th St
Kansas City, MO 64106
816-274-1381

Biggs, Alfred D Jr. IM
Suite T101
6420 Prospect
Kansas City, MO 64132
816-363-4100

Biggs, Harry L GP
RR2 Box 545
Galena, MO 65656

*Billow, Michael A PD
Anesthesia Assoc of KC
6400 Prospect Ste 138
Kansas City, MO 64132
816-444-1139

Bills, Marvin L N
7434 Baywoods Lane
Pensacola, FL 32504

Binda, Robert E AN
Anesthesia Assoc of KC, Inc
6400 Prospect Suite 138
Kansas City, MO 64132
816-444-1139

Birenboim, Nancy IM
1000 E. 50 #405
Kansas City, MO 64110
816-444-4806

Black, Don A IM
Suite T101
6420 Prospect
Kansas City, MO 64132
816-363-4100

Black, Thomas C Jr. OPH
1010 Carondelet Dr Suite 416
Kansas City, MO 64114
816-942-8555

Blim, R. Don PD
206 Broadway Med. Bldg.
4400 Broadway
Kansas City, MO 64111
816-561-8100

Bloom, Stephen A CD
4949 Rockhill Rd.
Kansas City, MO 64110
816-276-8260

Blum, Philip C AN
6400 Prospect #138
Kansas City, MO 64132
816-444-1139

Bode, Eugene T AN
Suite 200 8900 Ward Parkway
Kansas City, MO 64114
816-363-5652

Bodenhausen, Gary E FP
104 N. 7th Highway
Blue Springs, MO 64015
816-229-8880

Bogart, Douglas B CD
415 Penn Park
2929 Baltimore
Kansas City, MO 64108
816-756-0695

Bohn, William W ORS
6420 Prospect Suite T415
Kansas City, MO 64132
816-523-1520

Bohon, Barbara D OBG
4400 Broadway Suite 302
Kansas City, MO 64111
816-753-7060

Bordy, Marvin D PD
930 Carondelet Dr. Ste 302
Kansas City, MO 64114
816-942-5137

---

*Doctor of osteopathy.

Borkon, A. Michael CDS
Suite 50-II 4320 Wornall Rd.
Kansas City, MO 64111
816-931-7743
Botwin, Arnold E GS
502 W. 75th
Kansas City, MO 64114
Bower, James S PUD
Suite T303 6420 Prospect
Kansas City, MO 64132
816-333-1919
Bowlin, Steven K IM
Suite T101 6420 Prospect
Kansas City, MO 64132
816-363-4100

Bowser, John F R
22 Esmeralda Place
Hot Springs, AR 71909
Boyd, George K IM
4320 Wornall Rd
Kansas City, MO 64111
816-931-1166
Boyer, Philip A GER
825 W. 101st Terrace
Kansas City, MO 64114
Boylan, Peter C ORS
Rockhill Medical Plaza North
Suite 103 6650 Troost
Kansas City, MO 64131
816-444-4664
Braby, Howard H OBG
1515 W Truman Rd Ste 306
Independence, MO 64050
816-836-4200
Bradford, John F OPH
124 Medical Plaza
4320 Wornall
Kansas City, MO 64111
816-931-4840
Bradley, James K PUD
2929 Baltimore Suite 545
Kansas City, MO 64108
816-561-6277
Bradshaw, Wm D FP
6426 Sagamore Road
Mission Hills, KS 66208
Brand, Stanley N GE
710 Highland Prof Tower
6724 Troost
Kansas City, MO 64131
816-333-6000
Braverman, Abe E IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-363-7710
Brewer, Joseph H ID
Suite 415 4620 J.C. Nichols
Kansas City, MO 64112
Brick, Jeffrey M OPH
504 Highlands Prof. Tower
6724 Troost
Kansas City, MO 64131
816-333-5515
Brock, Arthur L GE
1515 West Truman Rd. #403
Independence, MO 64050
816-836-1616
Brodkey, Mark J U
T417 Research Tower Bldg.
6420 Prospect
Kansas City, MO 64132
816-333-6403
Brook, Charles J PUD
6420 Prospect
Suite T303
Kansas City, MO 64132
816-333-1919
Brothers, Mary E OM
2727 Main St.
Kansas City, MO 64108
816-842-3480
Brower, Clyde L FP
18811 E. 78 Hwy
Independence, MO 64057
816-461-1387
Brown, Adrian J FP
12 East 63rd St
Kansas City, MO 64113
816-333-6286
Brown, Elwyn S AN
200 W. 115th St.
Kansas City, MO 64114
Brown, Frances S IM
5665 McCoy Ave.
Kansas City, MO 64133
816-252-9380
Brown, Irwin S U
RR #1 Box 43
La Cygne, KS 66040
913-757-4484
Brown, Marden L FP
1515 W. Truman Suite 302
Independence, MO 64050
816-836-8200

Brown, Menzie H R
2928 Main
Suite 340
Kansas City, MO 64108
816-756-1050
Brown, Robt S OBG
Suite 304 930 Carondelet Dr.
Kansas City, MO 64114
816-943-2229
Browne, Jon E ORS
Corporate Woods Bldg 12
10975 Benson, Suite 300
Overland Park, KS 66210
913-339-6699
Bruce, Robert P ORS
6420 Prospect Suite 207
Kansas City, MO 64132
816-444-9000
Bryan, Wm H GS
3939 Prospect
Kansas City, MO 64130
816-861-2510
Bryant, T J IM
615 Highlands Prof Tower
6724 Troost
Kansas City, MO 64131
816-444-9348
Buchanan, Barbara N CHP
Suite 202 4400 Broadway
Kansas City, MO 64111
816-561-2025
Buchwach, Kenneth A OTO
4240 Blue Ridge Blvd.
Suite 434
Kansas City, MO 64133
816-358-7177
Buckner, Robert C OBG
3507 West 87th Street
Leawood, KS 66206
Budke, Harold A FP
1219 W. 66th Terrace
Kansas City, MO 64113
816-444-8065
Buie, Bruce R FP
11201 Colorado
Kansas City, MO 64137
816-763-5200
Buie, Steven E FP
733 NW Silver Ridge
Lee's Summit, MO 64081
Bunting, Williston P OTO
1231 W 62nd St.
Kansas City, MO 64113
816-444-4310
Burch, Timothy K PTH
1010 Carondelet Suite 126
Kansas City, MO 64114
816-942-8100
Burry, Virgil F PD
Childrens Mercy Hosp
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3015
Butcher, Robert W IM
6700 Troost Suite 416
Kansas City, MO 64131
816-333-0600
Butin, Richard E IM
6420 Prospect Suite T101
Kansas City, MO 64132
816-363-4100
Butterfield, Mari Anne AN
618 Pinehurst
Lee's Summit, MO 64063
Butterworth, Nelson S IM
725 W 49th Terrace
Kansas City, MO 64112
816-561-4499
Byars, Steven R OPH
6650 Troost Suite 310
Kansas City, MO 64131
816-333-1120
Cabanas, Justo J P
3806 W. 52nd Terr
Shawnee Mission, KS 66205
Caffrey, Raymond J PTH
1509 W. Truman Rd.
Independence, MO 64050
816-836-8100
Caldwell, John K FP
436 E. 65th Terrace
Kansas City, MO 64131
816-444-7666
Calhoun, Kirk A IM
1000 E. 50 #405
Kansas City, MO 64110
816-444-4806
Callaway, Jo J P
4320 Wornall #704
Kansas City, MO 64111
816-561-2524
Callaway, Lawrence A PTH
Laboratory Trinity Lutheran
31st & Wyandotte
Kansas City, MO 64108
816-753-4600
Callenbach, John C PD
Childrens Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3591

Calovich, Emery R IM
3500 W. 49th Street
Shawnee Mission, KS 66205
Campbell, Frederick B CRS
4550 Warwick Apt. 1212
Kansas City, MO 64111
816-561-7912
Campbell, John G CRS
6400 Prospect Suite 228
Kansas City, MO 64132
816-333-7565
Canent, Ramon V PDC
4320 Wornall Rd. #348
Kansas City, MO 64111
816-753-4414
Capps, Eugene C AN
7921 El Monte
Shawnee Mission, KS 66208
Carlson, Hjalmar E U
8805 W. 102nd Pl #A Box 9R
Overland Park, KS 66212
Carter, James E Jr. FP
7800 Paseo
Kansas City, MO 64131
816-523-3055
Caruso, Alfred A OBG
Suite 412 1010 Carondelet
Kansas City, MO 64114
Caruso, Peter J OBG
2018 W. 70th Terrace
Shawnee Mission, KS 66208
816-556-3529
Case, Wm F OPH
416 Carondelet Medical
1010 Carondelet Dr
Kansas City, MO 64114
816-942-8555
Casement, Brian A AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139
Cashman, John W PH
AT&T Technical Systems
777 North Blue Parkway
Lee's Summit, MO 64063
816-524-3442
Caughron, Michael R PTH
2316 E Meyer Blvd.
Kansas City, MO 64132
816-276-4692
Centner, Paul J GS
4304 W. 66th St.
Prairie Village, KS 66208
Chandler, Robt A PS
4177 Broadway
Kansas City, MO 64111
816-561-1414
Chandra, Mahesh IM
1515 W Truman Rd Suite 301
Independence, MO 64050
816-836-8130
Charapata, Steven G AN
6400 Prospect Suite 138
Kansas City, MO 64114
816-444-1139
Charette, Richard P PD
9150 E. 41st Terr.
Kansas City, MO 64133
816-356-5000
Chaudhuri, Sudha T OBG
6225 Raytown Trafficway
Raytown, MO 64133
816-353-2400
Chaudhuri, Tapan K IM
6225 Raytown Trafficway
Raytown, MO 64133
816-353-2400
Chernoff, Selbert G IM
600 NW Murray Rd. Suite 201
Lee's Summit, MO 64081
816-524-5600
Childs, Donna S CHP
4400 Broadway - Suite 202
Kansas City, MO 64111
816-561-2025
Childs, Richard M P
4320 Wornall Rd Ste 452
Kansas City, MO 64111
816-531-2325
.ilton, Jonathan D NS
6420 Prospect Suite T411
Kansas City, MO 64132
816-363-2500
Chu, Peter Y GS
1010 Carondelet Dr. Ste 320
Kansas City, MO 64114
816-942-8250
Chun, Chung S PD
6420 Prospect Suite T 205
Kansas City, MO 64132
816-363-1304
Chung, Richard T IM
1204 W. 40 Hwy
Blue Springs, MO 64015
816-229-4555
Churchill, Stephen W CHP
4400 Broadway Suite 202
Kansas City, MO 64111
816-561-2025

---

*Doctor of osteopathy

Cibis, Gerhard W OPH
421 Plaza Medical Bldg
4620 JC Nichols Park
Kansas City, MO 64112
816-561-0306
Clark, Granville E PD
6025 Prospect
Kansas City, MO 64130
816-333-3112
Clark, Irving H FP
11909 Madison
Kansas City, MO 64145
Cline, Daniel M IM
14 E. 56th St.
Kansas City, MO 64113
Cline, Merle A GP
4126 St John Ave
Kansas City, MO 64123
816-483-3119
Cline, Patricia W R
14 E. 56th Street
Kansas City, MO 64113
417-836-1945
Cloogman, Howard M DR
Suite 340 - 2928 Main
Kansas City, MO 64108
816-753-4600
Clothier, Robt W PD
17500 Medical Center Pkwy
Suite 5
Independence, MO 64057
816-373-1111
Clough, Chas A NS
4440 Broadway Suite 301
Kansas City, MO 64111
816-561-4655
Clymer, David J ORS
Carondelet Med Bldg #426
1010 Carondlet Dr.
Kansas City, MO 64114
816-941-0200
Cockerell, Charles F PD
205 West R.D. Mize Rd. #304
Blue Springs, MO 64015
816-228-4770
Cockerell, Sanford F PD
11200 Winner Rd
Independence, MO 64052
816-252-9850
*Cohen, Donald L IM
Suite 408-6724 Troost
Kansas City, MO 64131
816-361-2123
Cohen, Harry K FP
Suite 408-6724 Troost
Kansas City, MO 64131
816-361-2123
Cohen, Joel N TR
Suite 340-2928 Main
Kansas City, MO 64108
816-756-1050
Cohen, Lawrence S CD
Plaza Medical Bldg.
1000 E 50th Ste 305
Kansas City, MO 64110
816-363-8100
Cohen, Marvin C GS
6650 Troost Suite 105
Kansas City, MO 64131
816-523-3220
Cokingtin, Leovigildo C PD
Suite 310
1515 W. Truman Rd.
Independence, MO 64050
816-833-0990
Cole, Sherman W P
6400 Prospect Suite 312
Kansas City, MO 64132
816-636-5554
Colglazier, Mary C IM
204 Plaza Time Bldg
411 Nichols Rd.
Kansas City, MO 64112
816-753-7496
Collier, Robert E EM
2800 Hospital Drive
Kansas City, MO 64116
816-346-7000
Collins, John W ORS
8408 Hedges
Raytown, MO 64138
Colom, Geo A P
602 Highlands Prof Towe
6724 Troost
Kansas City, MO 64131
816-333-5941
Conn, Robert D CD
Medical Plaza II-20
4320 Wornall Rd.
Kansas City, MO 64111
816-931-1883
Conner, W. Edwin CRS
304 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-5648

Coppinger, Thos A IM
415 Penn Park
2929 Balitmore
Kansas City, MO 64108
816-756-0695
Cordell, Larry D ORS
6420 Prospect Ave. #T207
Kansas City, MO 64132
816-444-9000
Cornwell, Karen R OBG
1010 Carondelet Dr. Ste.328
Kansas City, MO 64114
816-941-0700
Cortez, Edwin A MFS
6675 Holmes Suite 340
Kansas City, MO 64131
816-444-2895
Cortner, Mary C FP
6821 Rockhill Rd.
Kansas City, MO 64113
816-363-4646
Cotton, Thos R OTO
3725 Broadway
Kansas City, MO 64111
816-931-2606
Couchonnal, Guillermo IM
9150 E. 41st Terr.
Kansas City, MO 64133
816-356-5000
Cowan, Geo A TR
50 Windrush Court
Oldsmar, FL 34677
Cowan, John H R
2717 W. 104th Terrace
Leawood, KS 66206
Cox, Kenneth E OBG
510 Shamrock Lane
Apt. 302 Villa II
Lee's Summit, MO 64081
Craemer, Chris W FP
6601 Rockhill Rd.
Kansas City, MO 64131
816-361-7333
Cramer, Quentin IM
SSA Disability Ste 150
9140 Ward Parkway
Kansas City, MO 64114
816-444-0400
Crawley, Jennifer H DR
6724 Troost Suite 900
Kansas City, MO 64131
816-333-8420
Crockett, James E CD
4320 Wornall Med Plaza II-20
Kansas City, MO 64111
816-931-1883
Cronemeyer, Richard L DR
6650 Troost Suite 210
Kansas City, MO 64131
816-363-5606
Crouch, Thos T NEP
4320 Wornall Rd
Kansas City, MO 64111
816-531-0552
Crow, Martin L PS
408 Broadway Med Bldg
4400 Broadway
Kansas City, MO 64111
816-561-6633
Culver, Perry J Jr. IM
4320 Wornall Rd. Ste. 332
Kansas City, MO 64111
816-561-2000
Curran, Desmond OPH
109 Broadway Med Bldg
4400 Broadway
Kansas City, MO 64111
816-756-1333
Curran, Terrence OPH
4400 Broadway Bldg #109
Kansas City, MO 64111
816-756-1333
Curts, Calvin J OPH
714 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-561-2289
Cygan, Donald W PD
373 W. 101st Terr.
Kansas City, MO 64114
816-942-8200
Daily, Donna K PD
Children's Mercy Hosp.
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3591
Dalton, Timothy T AN
917 W. 120th
Kansas City, MO 64145
816-942-2714
Darnell, Dale E ORS
4320 Wornall Rd #720
Kansas City, MO 64111
816-753-5102
Davidner, Mark L IM
Suite 700-6724 Troost
Kansas City, MO 64131
816-333-1326

Davidson, Kendrick C R
Suite 710 4320 Wornall
Kansas City, MO 64111
816-531-9481
Davis, Alexander C IM
6724 Troost Suite 710
Kansas City, MO 64131
816-333-6000
Davis, Alfred W Jr. IM
4 E. 39th St.
Kansas City, MO 64111
Davis, Carl S FP
Lee's Summit FP
805 NE Rice Road
Lee's Summit, MO 64063
816-525-1244
Davis, Donald R GS
8021 Belinder
Leawood, KS 66206
Davis, Herbert V PD
4400 Broadway #206
Kansas City, MO 64111
816-561-8100
Davis, Jack M IM
Suite 206
8800 Blue Ridge
Kansas City, MO 64138
816-761-8190
Davis, John M IM
Suite 208 8800 Blue Ridge
Kansas City, MO 64138
816-761-8190
Davis, W. Bob DR
2928 Main Suite 340
Kansas City, MO 64108
816-756-1050
Day, Chester L P
4140 West 71st St.
Suite 108
Shawnee Mission, KS 66208
913-432-7276
Deeken, James H D
411 Nichols Rd Ste 170
Kansas City, MO 64112
816-561-9300
*Delaney, Adrain J Jr. AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139
Delcambre, Marie A IM
Suite 550 2900 Baltimore
Kansas City, MO 64108
816-942-8200
Dembinski, David R IM
4900 Swope Parkway
Kansas City, MO 64130
816-923-5800
Dempsey, Herbert A FP
615 W 3rd St
Lee's Summit, MO 64063
816-524-3799
Devins, George S PUD
520 Rockhill Med. Bldg.
6700 Troost
Kansas City, MO 64131
816-363-0787
DeFeo, Frederick G IM
10808 Wornall Road
Kansas City, MO 64114
DeFeo, Theodore C PTH
Wornall Rd At 44th St
Kansas City, MO 64111
816-932-2500
Diehl, Antoni M PDC
348 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-753-4414
Dixon, Geo D DR
710 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-9481
Dlabal, Luke J Jr. OTO
Suite 205
17221 E. 23rd St.
Independence, MO 64057
816-373-4300
Dlabal, Luke J Sr. FP
3729 Blue Ridge Blvd.
Independence, MO 64052
816-353-8554
Doering, Robt W GS
Suite 501
6420 Prospect Ave.
Kansas City, MO 64132
816-333-8151
Donohoe, Charles D N
17221 E 23rd St
Independence, MO 64057
816-373-3213
Dorsch, Ervin H FP
3807 S. Woodland
Independence, MO 64050
Dorzab, Linda L IM
Suite 120 - 1000 E. 50th St.
Kansas City, MO 64110
816-276-8971

---

*Doctor of osteopathy.

Dorzab, William E PTH
Menorah Medical Center
4949 Rockhill Rd
Kansas City, MO 64110
816-276-8262

Downey, James W FP
6906 W. 52nd Place 2A
Mission, KS 66202

Downs, Daniel M ORS
1010 Carondelet Dr.
Ste 426 Carondelet Bldg
Kansas City, MO 64114
816-941-0200

Drake, Roy F GS
6600 Outlook
Mission, KS 66202
816-361-5512

Draney, Thos E PD
28 Kirk Cudbright Dr.
Hiwasse, AR 72739
501-855-2651

Dreher, Richard L PD
Children's Mercy Hosp
24th & Gillham
Kansas City, MO 64108
816-234-3650

Driks, Michael R IM
Baptist Medical Center
6601 Rockhill Road
Kansas City, MO 64131
816-276-7162

Drisko, Robert M ORS
Suite 500 2929 Baltimore
Kansas City, MO 64108
816-561-3003

Drisko, Robert M II ORS
2929 Baltimore #500
Kansas City, MO 64108
816-561-3003

Dubin, Sol H ORS
Suite 401
1515 W Truman Rd
Independence, MO 64050
816-254-4800

Duello, Deborah K OBG
110 SW 2nd Street Suite C
Lee's Summit, MO 64063
816-525-4456

Duer, Mildred C PD
324 E 69th Terr
Kansas City, MO 64113
816-444-0808

Duerksen, Joseph J AN
4407 W 54th Terr
Shawnee Mission, KS 66205
913-432-9348

Dugan, Gerald F ORS
6650 Troost Avenue Suite 103
Kansas City, MO 64131
816-444-4664

Dukstein, Walter G Jr. NM
6400 Prospect #332
Kansas City, MO 64132
816-333-5787

Duncan, Wm H GS
8730 Walmer Drive
Overland Park, KS 66216

Durie, Robt H PUD
545 Penn Park
2929 Baltimore
Kansas City, MO 64108
816-561-6277

Durnell, Monaford D FP
Goppert Family Care Ctr
6601 Rockhill Rd
Kansas City, MO 64131
816-276-7600

Dwyer, Frank X D
6408 Verona Rd.
Shawnee Mission, KS 66208

Early, Gerald L TS
348 Rockhill Med. Bldg.
6700 Troost
Kansas City, MO 64131
816-333-9332

Earnest, James B CD
415 Penn Park
2929 Baltimore
Kansas City, MO 64108
816-756-0695

Eaton, Paula OBG
930 Carondelet Suite 304
Kansas City, MO 64114
816-943-2229

Edmisten, Jack P
P. O. Box 3340
16004 E. 35th St.
Independence, MO 64055
816-373-0936

Eikermann, William C P
100 Research Med. Off. Bldg.
6400 Prospect
Kansas City, MO 64132
816-523-0103

Eisemann, Gustave IM
Statland Clinic
6724 Troost Suite 710
Kansas City, MO 64131
816-333-6000

Elias, David J FP
9205 E New 40 Highway
Independence, MO 64055
816-356-2000

Elkins, Robert L U
Rockhill Med Plaza N.
6650 Troost Suite 206
Kansas City, MO 64131
816-333-0500

Ellfeldt, Howard J ORS
Suite T207
6400 Prospect
Kansas City, MO 64132
816-444-9000

Elliott, Raymond G FP
6136 Reinhardt Drive
Shawnee Mission, KS 66205

Elliott, Wade E FP
3517 Terrace St.
Kansas City, MO 64111

Ellis, Jean H OPH
17500 Med Ctr Parkway #7
Independence, MO 64057
816-373-5593

Ellis, John C OTO
4240 Blue Ridge Blvd #434
Kansas City, MO 64133
816-358-7177

Elser, Otto H OPH
604 Rankin Rd.
Independence, MO 64050
816-833-1000

Emory, Jeffrey O EM
Bethany Med Ctr
51 N 12th St Dept of EM
Kansas City, KS 66102
314-931-6403

Engelmann, Calvin E GS
1010 Carondelet Suite 405
Kansas City, MO 64114
816-941-7000

Enriquez, Roman S IM
2929 Baltimore #310
Kansas City, MO 64108
816-531-3530

Ericsson, Saml E P
6724 Troost Suite 205
Kansas City, MO 64131
816-361-0899

Eubank, David F PD
9406 E 63rd St
Raytown, MO 64133
816-356-1060

Eubank, Wm Y IM
Suite T101
6420 Prospect
Kansas City, MO 64132
816-363-4100

Evans, Jos C GS
Suite 402
1515 W. Truman Rd.
Independence, MO 64050
816-254-9292

Evans, Lawrence L GS
4320 Wornall Suite 424
Kansas City, MO 64111
816-531-6652

*Everett, James E FP
11319 Summit
Kansas City, MO 64114
816-942-7418

Fairchild, Robt C PD
8425 Rheinhardt Lane
Shawnee Mission, KS 66206
913-648-5606

Farnham, Milo M IM
1515 W Truman Rd Suite 502
Independence, MO 64050
816-833-4466

Farrar, Michael W CD
2900 Baltimore Suite 415
Kansas City, MO 64108
816-753-0155

Farrell, Edwin G PD
Childrens Mercy Hosp
24th & Gillham
Kansas City, MO 64108
816-234-3167

Farrell, Susan E PD
Chilren's Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3674

Fedotin, Michael S GE
6420 Prospect Ste T407
Kansas City, MO 64132
816-333-5424

Fee, Chester F ORS
16960 S. Metcalf
Stilwell, KS 66085

Ferber, Alan J OBG
373 W. 101st Terrace
Kansas City, MO 64114
816-942-8200

Ferguson, Donald S D
2608 W. Paseo
Kansas City, MO 64108
816-421-5747

Fernandez, Mark A IM
553 NW 55th Terrace #7
Kansas City, MO 64118
816-452-6761

Ferns, Francis E OBG
4400 Broadway Suite 306
Kansas City, MO 64111
816-931-9344

Ferris, Carl R IM
Apt 1207 333 W. Meyer Blvd
Kansas City, MO 64113
816-523-4083

Fibuch, Eugene E AN
St Lukes Hosp
44th And Wornal Rd
Kansas City, MO 64111
816-932-2033

Fisher, James K DR
710 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-9481

Fitzgerald, Robert H ORS
5219 West 96th Street
Shawnee Mission, KS 66207
913-649-2422

FitzSimmons, James G DR
4320 Wornall Road
710 Medical Plaza
Kansas City, MO 64111
816-531-9481

Flatley, John A GS
502 Rockhill Medical Bldg.
6700 Troost
Kansas City, MO 64131
816-361-6656

Fleming, Allan R HEM
6115 W. 65th Street
Shawnee Mission, KS 66202

Fletcher, Robert C OPH
2900 Baltimore Ave. #520
Kansas City, MO 64108
816-941-0020

Flicker, Michele R IM
Marion Laboratories
P. O. Box 9627 HBC #3
Kansas City, MO 64137
816-966-5000

Flynn, James M PTH
Meyer & Prospect
Research Medical Center
Kansas City, MO 64132
816-276-4151

Fogel, Steven T OBG
1000 E. 50th St., Suite 300
Kansas City, MO 64110
816-444-2505

Folck, Wm P OM
Admiral At Oak Street
Kansas City, MO 64106
816-842-1146

Forgue, Donald R PD
Childrens Mercy Hosp
24th & Gillham Rd
Kansas City, MO 64108
816-234-3267

Forman, Louis H P
4320 Wornall Rd
Kansas City, MO 64111
816-531-2325

Forsythe, Lees C PUD
530 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-753-4312

Forsythe, Robert W NS
6457 Verona Rd.
Shawnee Mission, KS 66208

Fortin, Felix D DR
4320 Wornall 710 Med Plaza
Kansas City, MO 64111
816-531-9481

Fouts, Dallas B IM
1515 W Truman Rd
Suite 301
Independence, MO 64050
816-836-8130

Fowler, Fred D NS
1247 W. 67th Terrace
Kansas City, MO 64113

Fowler, James W IM
12444 Linden
Leawood, KS 66209

Francisco, Clarence B N
24th & Gillham Rd.
Childrens Mercy Hosp
Kansas City, MO 64108
816-234-3090

*Frank, Robert A IM
Research Downtown Health
720 Oak St.
Kansas City, MO 64106
816-474-6690

Franks, Elliott L IM
6724 Troost #810
Kansas City, MO 64131
816-523-6606

Freeman, Jerry C OTO
3725 Broadway
Kansas City, MO 64111
816-931-2606

Freiden, Floyd J U
Rockhill Med. Plaza N.
6650 Troost Suite 206
Kansas City, MO 64131
816-333-5433

---

*Doctor of osteopathy.

French, M. Devonne PD
Two Rivers Psychiatric Hosp
5121 Raytown Road
Kansas City, MO 64133
Fried, John S ID
P. O. Box 7783
Overland Park, KS 66207
913-676-7085
Friedman, Morris L IM
2516 W. 69th St.
Shawnee Mission, KS 66208
Fritzlen, Thos J PTH
Suite 126 1010 Carondelet Dr
Kansas City, MO 64114
Fuhrman, Donald L D
3417 W. 68th St.
Shawnee Mission, KS 66208
913-362-3108
Furlong, Lawrence D DR
2508 W. 118th St.
Leawood, KS 66211
913-345-8231
Gaba, James E OM
4631 Orville Suite 103
Kansas City, KS 66102
816-596-2774
Galant, Mark R IM
17053 S. 71 Hiway
Belton, MO 64012
816-331-4000
Galblum, Larry I PTH
6550 B-C Troost Ave.
Kansas City, MO 64131
816-333-7888
Galbreath, Ashford M IM
4706 Broadway Suite 110
Kansas City, MO 64112
816-753-6112
Gard, Raymond F GS
7077 E. Central Apt 1
Wichita, KS 67206
Garfinkel, Lester S PM
3011 Baltimore
Kansas City, MO 64108
816-756-2250
Garner, James H ORS
1010 Carondelet Dr. #426
Kansas City, MO 64114
816-941-0200
Garrison, Roy F PD
404 W. 67th Terr.
Kansas City, MO 64113
816-363-2517
Gaskins, John H PS
1102 Villager 877 N A-1-A
Indialantic, FL 32903
Gauthier, Charles P PTH
2316 E Meyer Blvd
Kansas City, MO 64132
816-276-4151
Geier, Larry J IM
6420 Prospect Ave. Ste. T101
Kansas City, MO 64132
816-363-4100
Geiger, Wm A Jr. AN
6400 Prospect Suite 138
Kansas City, MO 64132
Geraghty, Thomas E PS
4620 JC Nichols Pkwy Ste 503
Kansas City, MO 64112
816-455-3062
Germann, Donald R DR
710 Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
816-932-2550
Gholkar, Vijay R AN
St Luke's Hospital
44th & Wornall Rd.
Kansas City, MO 64111
816-932-2033
Gibbons, Robert T Jr. AN
8800 Ballentine
Overland Park, KS 66214
913-894-4050
Gibson, David M PTH
5049 Wornall Rd. 8F
Kansas City, MO 64112
816-444-1818
Ginardi, Donald E IM
420 W. 98th St..
Kansas City, MO 64114
816-941-9200
Ginsberg, B. William GE
6420 Prospect Ste T407
Kansas City, MO 64132
816-333-5424
Giorgi, Lee V IM
4320 Wornall Rd. Suite 11-20
Kansas City, MO 64111
816-931-1883
Givler, Robt L PTH
Research Medical Center
2316 E. Meyer Blvd.
Kansas City, MO 64132
816-276-4151
Glaser, Larry F ORS
6724 Troost Ste 300
Kansas City, MO 64131
816-363-6500
Glasscock, Ernest L PD
6214 High Dr
Shawnee Mission, KS 66208
913-362-3393
Glazer, Melvin L IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-363-7710
Glenski, James A PD
Suite 138
6400 Prospect
Kansas City, MO 64132
816-444-1139
Glueck, Robert M IM
4949 Rockhill Road
Kansas City, MO 64110
816-276-8260
Goerz, Ann A PD
4336 Dover
Independence, MO 64055
816-373-0674
Goerz, Royal D OBG
1515 W Truman Road #306
Independence, MO 64050
816-836-4200
Goetz, Joseph J DR
2928 Main Suite 340
Kansas City, MO 64108
816-756-1050
Goetz, Kenneth L OS
4856 Black Swan Drive
Shawnee Mission, KS 66216
Goheen, John R PUD
930 Carondelet Suite 100
Kansas City, MO 64114
816-941-4456
Goldman, Barry C IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-363-7710
Goldman, Stanley L A
5734 Windsor
Shawnee Mission, KS 66205
Goldsich, Edward OBG
4320 Wornall Rd. #520
Kansas City, MO 64111
816-531-9400
Goldstein, Marvin F OPH
6724 Troost
504 Highlands Prof Twr
Kansas City, MO 64131
816-333-7805
Good, Thomas H CD
Medical Plaza II-20
4320 Wornall Road
Kansas City, MO 64111
816-931-1883
Goolsbee, Robt L AN
6438 Sagamore
Shawnee Mission, KS 66208
913-362-5619
*Gordon, Stephen M OBG
Suite 410 1000 E. 50th St.
Kansas City, MO 64110
816-561-9496
Gottsch, Joseph C ORS
2929 Baltimore Ave
#550 Pen Park Bldg.
Kansas City, MO 64108
816-531-6336
Gowdamarajan, Rengasamy PDC
24th & Gillham
Kansas City, MO 64108
816-234-3255
Graham, Bruce D CRS
Suite 228 6400 Prospect
Kansas City, MO 64132
816-333-7565
Graham, Patrick G TS
4320 Wornall #344 Med Plaza
Kansas City, MO 64111
816-753-0600
Graham, Wallace H GS
5157 Ward Parkway
Kansas City, MO 64112
*Grassle, Donna M IM
17216 W. 67th St.
Shawnee, KS 66216
913-268-8788
Grechus, John J FP
Truman Medical Center
2301 Holmes
Kansas City, MO 64108
816-556-3529
Green, J. Richard GS
3143 Santa Fe Terr
Independence, MO 64055
816-373-4646
Green, Thomas F OBG
17500 Med Ctr Parkway Ste 3
Independence, MO 64057
816-478-0220
*Greenspan, Peter B OBG
1515 West Truman Rd. #306
Independence, MO 64050
816-836-4200
Griffin, Donald R AN
8728 Catalina Dr
Shawnee Mission, KS 66208
913-383-3467
Grimes, Elwyn M REN
Suite 650B 3101 Broadway
Kansas City, MO 64111
816-931-2733
Growdon, John A GS
6508 Aberdeen Road
Shawnee Mission, KS 66208
913-362-6333
Gruenebaum, Michael I IM
8630 Halsey
Lenexa, KS 66215
913-492-6600
Grunt, Jerome A PD
Childrens Mercy Hosp
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3070
Guastello, Joseph R OTO
512 Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
816-753-5663
Guastello, Mario J OTO
Suite 512 4320 Wornall Road
Kansas City, MO 64111
816-753-5663
Guerra, Gaston G GS
2900 Baltimore Suite 101
Kansas City, MO 64108
816-561-5880
Gundle, Sigmund P
3806 W. 79th Terrace
Prairie Village, KS 66208
913-642-1048
Gunn, Richard W IM
317 North Van Brunt
Kansas City, MO 64123
Gunnoe, Robert E D
6420 Prospect Suite T419
Kansas City, MO 64132
816-333-5266
Gupta, Mala R ID
Trinity Lutheran Hosp
3030 Baltimore Ave.
Kansas City, MO 64108
816-753-4600
Gura, George M JR. CD
Medical Plaza 11 20
4320 Wornall Rd.
Kansas City, MO 64111
816-931-1883
Gurba, Danny K ORS
4320 Wornall Rd. Suite 610
Kansas City, MO 64111
816-531-5757
Gustafson, Jon E R
4510 N. Lake Drive
Lee's Summit, MO 64064
816-252-8800
Gutek, E. Philip PS
4400 Broadway Ste 408
Kansas City, MO 64111
816-561-6633
Gutierrez, Anthony C IM
2408 E. 110 St.
Kansas City, MO 64131
816-942-4954
Gutknecht, Richard OBG
17500 Med Ctr Parkway Ste 3
Independence, MO 64057
816-478-0220
Haas, Harry D IM
624 Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
816-531-1813
Habib, Henry N U
T313 Research Tower Bldg.
6420 Prospect
Kansas City, MO 64132
816-333-6403
Hagen, Douglas W AN
6400 Prospect Suite 138
Kansas City, MO 64132
Bahn, Bruce H GS
615 W. 3rd Street
Lee's Summit, MO 64063
816-524-3799
Hahn, Frederick W OTO
Suite 204 4801 Cliff Ave.
Independence, MO 64055
Baight, J. Max FP
4601 Independence Ave.
Kansas City, MO 64124
816-231-4822
Haith, Walter F OBG
Prime Health Stadium
9150 E. 41st Terr
Kansas City, MO 64133
816-356-5000
*Hall, Frederick K NPM
Children's Mercy Hosp
24th & Gillham
Kansas City, MO 64108
816-234-3593

---

*Doctor of osteopathy.

Hall, John C D
416 Broadway Med Bldg.
4400 Broadway
Kansas City, MO 64111
816-561-7783
Hall, Robt T PD
24th Gillham Road
Kansas City, MO 64108
816-234-3593
Halperin, Phillip H GS
8348 Somerset
Shawnee Mission, KS 66207
Hamburg, Mitchell S IM
4400 Broadway
Suite 316
Kansas City, MO 64111
816-756-2520
Hamburger, Stephen C IM
4409 W. 93rd
Shawnee Mission, KS 66207
Hamill, Robert W IM
1107 59th Street South
Gulfport, FL 33707
Hannah, Hamner III CDS
630 W. 70
Kansas City, MO 64113
816-931-6366
Hannas, Ralston R EM
11812 Avila Dr
Kansas City, MO 64114
816-942-7086
Hansen, Thomas L PD
17500 Medical Center Pkway
Suite 5
Independence, MO 64057
816-373-1111
Hanson, E J NS
4320 Wornall Rd Ste 328
Kansas City, MO 64111
816-931-1150
Hanson, Karl H HEM
4320 Wornall Ste 212
Kansas City, MO 64111
816-531-0930
Harbrecht, James J CD
Suite 40 11 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-5510
Hardacre, Ruth A GP
5125 Swope Pkwy #1116
Kansas City, MO 64130
Hardy, Henry M AN
6606 Overhill Rd
Shawnee Mission, KS 66208
913-362-3369
Hardy, John W IM
1100 Walnut St. Room 606
P. O. Box 419418
Kansas City, MO 64141
816-654-2765
Harless, Morris S GS
Rt 4 Box 85
Galena, MO 65656
Harlow, Richard J Jr IM
17053 South 71 Highway
Belton, MO 64012
816-331-4000
Harris, David J PD
Childrens Mercy Hosp
24th At Gillnam Rd
Kansas City, MO 64108
816-234-3290
Harris, Lanny W ORS
Suite T415
6420 Prospect
Kansas City, MO 64132
816-523-1520
Harris, Weldon L PD
17500 Medical Center Pkway
Suite 5
Independence, MO 64057
816-373-1111
Harrison, Garth F PUD
Suite T303 6420 Prospect
Kansas City, MO 64132
816-333-1919
Hart, L. Wayne CHP
4400 Broadway Ste 202
Kansas City, MO 64111
816-561-2025
Hartwig, Frederick H GS
Suite T501-6420 Prospect
Kansas City, MO 64132
816-333-8155
Hartwig, Raymond W R
2928 Main Suite 340
Kansas City, MO 64108
816-756-1050
Hartzler, Geoffrey O CD
Medical Plaza 11 20
4320 Wornall Rd.
Kansas City, MO 64111
816-931-1883
Hausheer, Herman J OBG
1515 W Truman Rd Ste 30
Independence, MO 64050
816-836-4200

Hayes, Kimberly W OBG
1515 W. Truman Road Ste 306
Independence, MO 64050
816-836-4200
Hazen, Robt M OTO
9919 Ensley Lane
Leawood, KS 66206
Hazuka, David F DR
4036 West 104th Terr
Shawnee Mission, KS 66207
913-381-1359
Healy, Brian E CPS
426 Carondelet Med. Bldg.
1010 Carondelet Dr.
Kansas City, MO 64114
816-941-1969
Hedge, S. Roy CD
6650 Troost Suite 106
Kansas City, MO 64131
816-444-7444
Hellerstein, Stanley PD
Childrens Mercy Hosp
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3010
Helling, Thomas S GS
308 Medical Plaza
4320 Wornall Road
Kansas City, MO 64111
816-753-7460
Hellman, Richard IM
2940 Baltimore Suite 400
Kansas City, MO 64108
816-561-7800
Helzberg, John H GE
4320 Wornall Road #332
Kansas City, MO 64111
816-561-2000
Henry, Clarke L TS
6219 Reinhardt Drive
Shawnee Mission, KS 66205
Henry, Clarke L Jr CD
Suite 330 2929 Baltimore
Kansas City, MO 64108
816-531-0118
Henson, Bruce E IM
Suite T101
6420 Prospect
Kansas City, MO 64132
816-363-4100
Herdoiza, Alfonso W AN
5300 W. 98th Terrace
Overland Park, KS 66207
913-341-1681
Herman, Robert L CD
Rockhill Cardiology Group
6650 Troost Suite 106
Kansas City, MO 64131
816-444-7444
Hervey, Wm F AN
Wornall Rd At 44th
Kansas City, MO 64111
816-932-2033
Heryer, John W CPS
4320 Wornall Rd.
Suite 304
Kansas City, MO 64111
816-531-5648
Hibbard, Blaine Z IM
8410 Belinder
Shawnee Mission, KS 66206
Hickman, Peri L IM
Truman Medical Center
2301 Holmes
Kansas City, MO 64108
816-474-6810
Hicks, Ralph A PD
Children's Mercy Hospital
24th & Gillham Road
Kansas City, MO 64108
816-234-3898
Hierholzer, Rebecca S EM
North Kansas City Hospital
2800 Hospital Drive
Kansas City, MO 64116
816-346-7980
Higgins, Edward F JR CDS
Suite T 505 6420 Prospect
Kansas City, MO 64132
816-361-3988
Higgins, Ronald A D
340 Carondelet Med Off
1010 Carondelet Dr
Kansas City, MO 64114
816-942-1150
Hill, Jack H PTH
8115 Meadow Lane
Leawood, KS 66206
913-649-0284
Hink, Frederick W FP
3497 Shady Bend Dr.
Independence, MO 64052
Hinson, Gary W R
Menorah Medical Center
4949 Rockhill Road
Kansas City, MO 64110
816-276-8078
Hodgson, Frank H GP
11605 W. 116th St.
Overland Park, KS 66210

Hoech, Geo P AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139
Hoeper, Samuel D FP
900 Main
Grandview, MO 64030
816-761-5588
Hoeper, Samuel D Jr. IM
400 W. 123 Terrace
Kansas City, MO 64145
816-761-5588
Hof, David G PUD
530 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-753-4312
Hoffmann, Alan L FP
6300 Evanston
Kansas City, MO 64133
816-353-1191
Hoffmann, Lee M N
4914 Belinder Rd.
Shawnee Mission, KS 66205
816-556-3489
Holder, Thos M PDS
509 Broadway Med Bldg
4400 Broadway
Kansas City, MO 64111
816-931-5538
Hollinger, Lloyd A PUD
6700 Troost #244
Kansas City, MO 64131
816-444-4700
Holman, Jos G A
4620 J C Nichols Pkwy
Kansas City, MO 64112
816-561-8500
Holton, Edward B OM
Thomas J. Lipton, Inc.
13000 East 35th St.
Independence, MO 64055
816-633-1700
Hopkins, James P PS
6650 Troost Suite 208
Kansas City, MO 64131
816-523-7811
Horine, Jon A IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-363-7710
Hornig, Gregory W NS
Suite 328 4320 Wornall Road
Kansas City, MO 64111
816-931-1150
Hornstra, Robijn K P
6724 Troost
Kansas City, MO 64131
816-361-0899
Hoskins, R. Bruce R
St. Lukes Hospital
44th & Wornall
Kansas City, MO 64111
816-932-2575
Howard, Campbell P PD
Children's Mercy Hosp.
24th And Gillham Rd.
Kansas City, MO 64108
816-234-3072
Hubbell, Marius M Jr. PDC
Children's Mercy Hospital
24th At Gillham Rd.
Kansas City, MO 64108
816-234-3255
Huet-Vaughn, Yolanda FP
5799 Broadmoor
Mission, KS 66202
913-722-5000
Hughes, Michael F OTO
1010 Carondelet Dr.
Suite 224
Kansas City, MO 64114
816-942-7200
Hull, Timothy A AN
1000 Carondolet
Kansas City, MO 64114
816-942-4400
Hunkeler, John D OPH
2900 Baltimore
Suite 650
Kansas City, MO 64108
816-931-4733
Hunzicker, Warren J IM
1248 Stratford Rd.
Kansas City, MO 64113
816-363-2688
Huse, William J II OBG
Suite 304 930 Carondelet Dr.
Kansas City, MO 64114
816-943-2229
Hustead, Russell M OBG
1010 Carondelet Suite 328
Kansas City, MO 64114
816-941-0700
Hustead, Virginia A PD
Children's Mercy Hospital
24th at Gillham Rd.
Kansas City, MO 64108
816-234-3592

---

*Doctor of osteopathy.

Hustor, Kent A RHU
8805 W. 64 Terrace #204
Merriam, KS 66202
913-362-2813

Hyde, Lawrence L OPH
3101 Broadway Suite 990
Kansas City, MO 64111
816-753-8070

Hyde, Rita M IM
1500 N.E. Parvin Rd.
Kansas City, MO 64116
816-452-4000

Ibarra, Guillermo P
4400 Broadway Suite 516
Kansas City, MO 64111
816-931-2947

Inciardi, Marc F R
Menorah Medical Center
4949 Rockhill Road
Kansas City, MO 64110
816-276-8201

Ingham, Walton C GS
9723 Overbrook Road
Shawnee Mission, KS 66206
913-648-2232

Inniss, Rosalyn E CHP
222 W. Gregory Suite 234
Kansas City, MO 64114

Irvine, John W OPH
6650 Troost Ave. #300
Kansas City, MO 64131
816-333-7376

Irwig, Fred IM
1830 Avenida Del Mundo
Coronado, CA 92118

Jackson, Mary Anne PD
Children's Mercy Hospital
24th at Gilliam
Kansas City, MO 64108
816-234-3795

Jackson, Max G FP
Research Medical Center
2316 E. Meyer Blvd.
Kansas City, MO 64132
816-276-4256

Jacob, Kenneth M DR
6724 Troost Suite 900
Kansas City, MO 64131
816-333-8420

Jacobs, Morton P
6416 Verona Rd.
Shawnee Mission, KS 66208
913-362-6971

Jacobs, Robyn H
210 East 68th Terrace
Kansas City, MO 64113
816-523-0367

Jacobs, Walter H GE
6724 Troost Ave. #710
Kansas City, MO 64131
816-333-6000

James, Otis E ORS
7929 Bristol Court
Shawnee Mission, KS 66208
913-648-7929

Jantz, Keith IM
Kansas City Internal Med.
6420 Prospect #T101
Kansas City, MO 64132
816-363-4100

Jelley, V. Carl ORS
P. O. Box 370
Blue Springs, MO 64015
816-229-2781

Jenab, Morteza J CD
Rockhill Cardiology Group
6650 Troost - Suite 106
Kansas City, MO 64131
816-444-7444

Jenkins, David C CLP
4117 Adams Apt 201
Kansas City, KS 66103
616-753-4040

Jennett, J H IM
Apt. 1006 - 333 Meyer West
Kansas City, MO 64113
816-333-8946

Johnson, C. L. U
2900 Baltimore NO. 540
Kansas City, MO 64108
816-531-1418

Johnson, Dallas A D
6700 Troost Ste 504
Kansas City, MO 64131
816-333-4943

Johnson, Gareth R PTH
13111 E. 57th St.
Kansas City, MO 64133
816-356-0954

Johnson, James S OBG
6666 Winchester
Kansas City, MO 64133
816-353-7171

Johnson, Joseph E FP
707 W Montcrew
Kansas City, MO 64114
816-942-1841

Johnson, Joy A R
6650 Troost Suite 210
Kansas City, MO 64131
816-363-5606

Johnson, Richard L IM
12808 Locust
Kansas City, MO 64145
816-943-4382

Johnson, Thos M GS
8127 El Monte
Shawnee Mission, KS 66208
913-383-1366

Johnson, Warren L JR CD
Medical Plaza 11 20
4320 Wornall Rd
Kansas City, MO 64111
816-931-1883

Jonas, Harry S OBG
Apt 2903 400 E. Ohio
Chicago, IL 60611
312-645-4657

Jones, Elizabeth A IM
815 W. 71st Terrace
Kansas City, MO 64114
816-523-5263

Jones, Gale O AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139

Jones, Lowry Jr. ORS
4320 Wornall Road Suite 720
Kansas City, MO 64111
816-753-5102

Jones, Maynard C Jr. DR
3612 Basswood Dr.
Lee's Summit, MO 64063
816-478-1368

Jones, Patricia E PD
9150 E. 41st Terrace
Kansas City, MO 64133
816-356-5000

Jones, Randall W PTH
Independence Reg Hlth Ctr.
1509 W. Truman Rd.
Independence, MO 64050
816-836-8100

Jones, Robert F ORS
402 St. Marys Prof. Bldg.
205 West Rd - Mize Rd
Blue Springs, MO 64015
816-229-6800

Jones, T. Reid IM
6341 Poe Ave.
Shawnee Mission, KS 66208
913-362-9669

Joyce, Rex M GS
6420 Prospect Suite 501-T
Kansas City, MO 64132
816-333-8191

Joyce, Steven T ORS
610 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-5757

Justus, John B IM
5221 Howe Drive
Shawnee Mission, KS 66205
816-236-6778

Kagar, Stuart M PD
10640 W. 87th Street
Overland Park, KS 66214
816-362-6000

Kahn, Marvin A
Statland Clinic
6724 Troost Ste.710
Kansas City, MO 64131
816-333-6000

Kanarek, Joseph PD
601 E 63rd St Ste. 311
Kansas City, MO 64110
816-333-8666

Kandt, Raymond E OPH
416 Carondelet Medical
1010 Carondelet Dr
Kansas City, MO 64114
616-942-8555

Kantor, Julius M PD
930 Carondelet Dr. Suite 302
Kansas City, MO 64114
816-942-5137

Kanter, Sani CPH
5723 E. Maplewood Ave.
Englewood, CO 80111

Kartus, Irving P
PO Box 6453
Leawood, KS 66206

Kaufman, Andrew B NS
Suite 411 6420 Prospect
Kansas City, MO 64132
816-363-2500

Kaufmann, Herbert H OBG
1000 E. 50th St. Suite 300
Kansas City, MO 64110
816-444-2505

Kayanan, Jose C GS
100 W. 100th Terr Apt 107
Kansas City, MO 64114
816-561-6365

Keairnes, Harold W IM
6700 Troost Suite 40
Kansas City, MO 64131
816-444-6122

Keitges, Pierre W PTH
Physicians Ref. Lab.
1010 W. Carondelet Dr
Kansas City, MO 64114
816-942-8100

Kelly, Charles P PM
St. Luke's Hosp
44th And Wornall Rd.
Kansas City, MO 64111
816-932-2020

Keltner, Raymond O OBG
4400 Broadway Suite 302
Kansas City, MO 64111
816-753-7060

Kendall, Charles A IM
4240 Blue Ridge Blvd #500
Kansas City, MO 64133
816-356-8877

Kendall, Forrest H OTO
Suite 224
1010 Carondelet Dr
Kansas City, MO 64114
816-942-7200

Kennedy, Timothy D R
340 Penn Park
2926 Baltimore
Kansas City, MO 64106
816-756-1050

Kenney, John D III AN
1000 E. 50th Suite 340
Kansas City, MO 64110
816-333-7484

Kent, Bela K OBG
5839 Cherokee
Shawnee Mission, KS 66205
913-362-6993

Kerr, Harold H TS
41 Poquito Rd.
Shalimar, FL 32579

Ketterman, Grace H CHP
Crittenton Center
10918 Elm Ave.
Kansas City, MO 64134
816-765-6600

Khoury, Cecile S AN
3901 W. 121st Terrace
Leawood, KS 66209
913-345-8963

Khulusi, Basimah PM
10560 Barkley #24
Overland Park, KS 66212
816-756-2250

Khurana, Satish K PD
Prime Health
8630 Halsey
Lenexa, KS 66215
913-492-6600

Kilbride, Howard W PD
Children's Mercy Hosp
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3591

Killen, Duncan A TS
Medical Plaza II 50
4320 Wornall Rd
Kansas City, MO 64111
816-931-7743

Killion, Linza T U
Suite 240 4320 Wornall Rd.
Kansas City, MO 64111
816-753-2033

Kimball, Merritt H AN
610 E 26th
Kansas City, MO 64109
816-531-2094

Kimble, Harvey S AN
9841 Mall Ave.
Shawnee Mission, KS 66207
913-649-3405

Kindred, Lynn H CD
40 11 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-5510

King, J. Tenbrook CD
8228 Linden Drive
Prairie Village, KS 66208

Kingsbury, Helen AN
8451 Somerset Dr.
Shawnee Mission, KS 66207
913-381-1118

Kitchen, Wm M R
2700 W. 68th St.
Shawnee Mission, KS 66208
913-362-3235

Klein, Edward H GS
7011 Roe Ave
Shawnee Mission, KS 66208
913-362-7011

Knight, Lyle B GP
606 Shamrock Apt 106
Lee's Summit, MO 64063
816-524-3655

Knoch, H. Kermit OBG
6606 Willow Lane
Shawnee Mission, KS 66208
913-362-2350

---

*Doctor of osteopathy.

Koontz, Paul G GS
308 Medical Plaza
4320 Wornall Road
Kansas City, MO 64111
816-753-7460
Kopp, Kenneth R IM
8630 Halsey
Lenexa, KS 66215
913-492-6600
Koppers, Lawrence E END
4320 Wornall Rd.
Med Plaza II Suite 55
Kansas City, MO 64111
816-561-6464
Koury, William C R
4320 Wornall Rd Ste 710
Kansas City, MO 64111
816-531-9481
Kraft, Jacob GS
Suite 105 6650 Troost
Kansas City, MO 64131
816-523-1050
Kranson, Seymour J PD
909 W Johnston Ave.
Hemet, CA 92343
714-925-5425
Krebs, Festus J III OTO
Suite 208 6400 Prospect
Kansas City, MO 64132
816-361-5858
Krishna, Padma PD
Samuel U. Rodgers Health Ctr
825 Euclid
Kansas City, MO 64124
816-474-4920
Kuhn, Wm F OM
6412 Granada Dr.
Shawnee Mission, KS 66208
913-262-4459
Kunz, Stephen R R
P. O. Box 520435
Independence, MO 64052
Kurtz, Karl J U
4400 Broadway
Suite 412
Kansas City, MO 64111
816-561-7200
Kyger, John E AN
2400 R. D. Mize Rd.
Independence, MO 64057
Labayen, Ricardo A EM
10238 Hardy
Overland Park, KS 66212
913-362-5585
Labrie, Paul L GS
Independence Surgical Clinic
17221 E 23rd St.
Independence, MO 64057
314-373-4646
Laiben, Gregg R IM
1400 S. 7th Highway
Blue Springs, MO 64015
816-229-8187
Lally, James J GS
5760 Windsor Circle
Shawnee Mission, KS 66205
Landers, Burnell GE
4240 Blue Ridge Blvd. #801
Kansas City, MO 64133
816-358-0630
Landis, Geo K IM
1304 West Johns Blvd.
Raymore, MO 64083
Landsman, Ira S PD
Children's Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3000
Langley, Harriet S NEP
8419 Reinhardt Lane
Leawood, KS 66201
913-341-1036
Lapi, Angelo PTH
2012 Stratford Rd
Shawnee Mission, KS 66208
913-362-4127
Larsen, Wm E HEM
10311 Belinder
Shawnee Mission, MO 66206
816-753-4600
Latham, Raymond W PD
206 Broadway Med. Building
4400 Broadway
Kansas City, MO 64111
816-561-8100
Lauer, Danl J IM
236 Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
816-531-2020
Laughlin, Edward J IM
1515 W. Truman Rd. #406
Independence, MO 64050
816-461-6837
Laughlin, Thomas P AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-276-4000

Layle, John K Jr. RHU
212 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-0930
Layton, Ira C IM
4010 Washington - Suite 100
Kansas City, MO 64111
816-531-3908
LaBach, James E PTH
Physicians Reference Lab
1010 W. Carondelet
Kansas City, MO 64114
816-942-8100
Lederer, Charles M Jr. OPH
6650 Troost Suite 310
Kansas City, MO 64131
816-333-3525
Lednicky, Jay A IM
615 W. Third St.
Lee's Summit, MO 64063
816-524-3799
Lee, Charles K CDS
6700 Troost Suite 500
Kansas City, MO 64131
816-361-9508
Lee, Henry A R
12472 Linden
Leawood, KS 66209
Lee, King Y OPH
6650 Troost Ave. Suite 300
Kansas City, MO 64131
816-333-7376
Lee, Tae H NEP
9718 Sagamore Drive
Leawood, KS 66206
Leese, Philip T EM
5100 E. 24th St.
Kansas City, MO 64127
816-483-1850
Legarda, Maria M N
Suite 400 6724 Troost
Kansas City, MO 64131
816-444-4082
Legler, Larry E FP
17611 E. 24th Highway
Independence, MO 64056
816-257-7787
Leibsohn, Joel M OPH
1515 W Truman Rd
Suite 505
Independence, MO 64050
816-836-8166
Leifer, Gary U
Rockhill Medical Plaza N.
6650 Troost Suite 206
Kansas City, MO 64131
816-333-0500
Leifer, Wm W U
121 W. 48th #1107
Kansas City, MO 64112
Lentz, Clark H OM
2600 W. 69th St.
Shawnee Mission, KS 66208
913-362-7515
Lentz, Harold C U
1515 W. Truman Rd.
Suite 404
Kansas City, MO 64050
816-836-8831
Lerner, Bruce AN
2400 R. D. Mize Road
Independence, MO 64057
913-492-9269
Lerner, Scott A PUD
4320 Wornall Suite 510
Kansas City, MO 64111
816-756-2255
Letizia, Wayne L IM
1210 Ash Avenue
Independence, MO 64052
816-252-7800
Levelle, Jonathan P AN
1000 E. 50th #340
Kansas City, MO 64110
314-333-7484
Levey, Harry B OBG
6022 Harrison
Kansas City, MO 64110
816-444-5538
Levi, Bernard CD
4949 Rockhill Rd.
Kansas City, MO 64110
816-276-8260
Lewis, Frank H IM
500 Blue Ridge Tower
4240 Blue Ridge Blvd.
Kansas City, MO 64133
816-836-8877
Lewis, Revis C NS
425 Penn Park
2929 Baltimore
Kansas City, MO 64108
816-561-8288
Liang, Jing C GS
17221 E 23rd
Independence, MO 64057
816-373-4646
Lichtor, Jos M CRS
6724 Troost Suite 409
Kansas City, MO 64131
816-363-5442

Liljedahl, Roger L AN
P. O. Box 11316
Kansas City, MO 64112
816-276-7901
Lindgren, Carleton J P
4240 Blue Ridge Blvd #411
Kansas City, MO 64133
816-358-6262
Link, Vance E FP
Suite 302
1515 W. Truman Rd.
Independence, MO 64050
816-836-8200
Lintecum, Frederick B OBG
4320 Wornall Rd. Suite 520
Kansas City, MO 64111
816-531-9400
Linville, Howard E GS
9905 Cherokee Lane
Shawnee Mission, KS 66206
913-642-2507
Liu, Ben C OBG
373 W. 101st Terrace
Kansas City, MO 64114
816-356-5000
Lockwood, Gary F OBG
4320 Wornall Rd Ste 520
Kansas City, MO 64111
816-531-9400
Lockwood, Ted E PS
408 Broadway Medical Bldg.
4400 Broadway
Kansas City, MO 64111
816-561-6633
Lofgreen, Craig S FP
6300 Enterprise Suite 110
Kansas City, MO 64108
816-231-3611
Loftus, Loretta S HEM
UMKC School Of Medicine
2411 Holmes
Kansas City, MO 64108
816-276-1930
Lohrentz, Lois H AN
2800 W 50th Terrace
Shawnee Mission, KS 66205
913-333-7484
Long, P S FP
6601 Rockhill Road
Kansas City, MO 64131
816-276-7600
Lopez-Plata, Roberto GS
1010 Carondelet Dr. #208
Kansas City, MO 64114
816-333-6750
Loren, Michael L PDA
17500 Medical Center Parkway
Suite 6
Independence, MO 64057
816-478-1500
Lorenzo, Edilberto B CHP
1820 W 91st Place Suite 305
Kansas City, MO 64114
816-361-7476
Lotuaco, Gamaliel G PS
5520 College Blvd. #232
Overland Park, KS 66211
913-491-6374
Loutzenhiser, James K P
1010 Carondelet Dr.
Suite 424
Kansas City, MO 64114
816-942-8445
Love, Gerry A IM
8720 Cambridge Apt. 608
Kansas City, MO 64138
816-353-5649
Luetje, Charles M OTO
3100 Broadway Suite 509
Kansas City, MO 64111
816-531-7373
Lyddon, Harold F Jr. FP
1221 W. 67th St.
Kansas City, MO 64113
816-444-0274
Lynch, Gerald C AN
6400 Prospect Suite 136
Kansas City, MO 64132
816-444-1139
Lytle, Michael F AN
6400 Prospect Suite 138
Kansas City, MO 64132
616-444-1139
Maben, Sam E IM
9150 E. 41st Terr.
Kansas City, MO 64133
816-356-1060
MacDonald, Robin R DR
6650 Troost, Suite 210
Kansas City, MO 64131
816-363-5606
MacGee, Edwin E NS
4440 Broadway
Kansas City, MO 64111
816-561-4655
MacInnis, Florence E PUD
9311 Briarwood Circle
Sun City, AZ 85351

---

*Doctor of osteopathy

MacNaughton, Ralph E R
Carondelet Radiology In
1010 Carondelet Rm 114
Kansas City, MO 64114
816-942-6900
MacNaughton, Robert A R
108 The Woodlands
Cladstone, MO 64119
Mahmoud, Said F PUD
2900 Baltimore
Suite 350
Kansas City, MO 64108
816-753-1271
Mais, Thomas E P
12864 Sagamore Rd.
Shawnee Mission, KS 66209
913-341-2791
Majure-Lees, Joyce E FP
2929 Baltimore #500
Kansas City, MO 64108
816-561-8007
Maliszewski, James A IM
6420 Prospect Suite T101
Kansas City, MO 64132
816-363-4100
Mallouk, Alexander C IM
4320 Wornall Rd Ste 514
Kansas City, MO 64111
816-931-6712
Mallow, James E AN
2401 West 93rd St.
Shawnee Mission, KS 66206
913-381-1235
Mangum, William B OTO
434 Blue Ridge Tower
4240 Blue Ridge Blvd
Kansas City, MO 64133
816-358-7177
Manion, Thos S U
1515 W. Truman Rd. Suite 507
Independence, MO 64050
816-254-6116
Manuel, Louis C OPH
601 Citadel Bldg.
1734 E. 63rd St.
Kansas City, MO 64110
816-363-4700
Markway, Cregory A FP
17611 E. 24th Highway
Independence, MO 64056
816-257-7787
Marr, Garrett L CS
930 Carondelet Dr. Suite 301
Kansas City, MO 64114
Marsh, Alice PD
323 N. Campbell St.
Pleasant Hill, MO 64080
Marshall, Hal E PTH
Menorah Medical Center
4949 Rockhill Rd.
Kansas City, MO 64110
816-276-8262
Martin, Mark W FP
300 S.E. 2nd St.
Lee's Summit, MO 64063
816-524-2626
Maslan, Mark J OTO
6724 Troost Suite 200
Kansas City, MO 64131
816-333-6996
Masucci, Jos M FP
600 Argyle Bldg
306 East 12 St
Kansas City, MO 64106
816-221-8848
Matile, Gerald U OBG
4400 Broadway Suite 306
Kansas City, MO 64111
816-931-9344
Matovich, Violet B N
UMKC School of Medicine
2411 Holmes
Kansas City, MO 64108
816-276-1910
Matson, Jeffrey A AN
138 Research Med. Bldg.
6400 Prospect
Kansas City, MO 64132
816-444-1139
Matta, Camille S OPH
P. O. Box 7191
Riyadh 11462
Saudi Arabia, 00000
Mayer, John H Jr. TS
3030 Baltimore
Kansas City, MO 64108
McCallister, Ben D CD
4320 Wornall Med Plaza II-20
Kansas City, MO 64111
816-931-1883
McCanse, Andrew GS
Industrial Clinic North
2025 Swift
No. Kansas City, MO 64116
816-221-0058
McConahay, David R CD
4320 Wornall Med Plaza II-20
Kansas City, MO 64111
816-931-1883

McConchie, James E R
19839 Alta Loma Dr.
Sun City West, AZ 85375
McCormack, Robert E IM
9150 E. 41st Terr
Kansas City, MO 64133
816-356-5000
McCoy, Frederick J PS
4177 Broadway
Kansas City, MO 64111
816-561-1414
McCroskey, Lon C CS
Room T505 Research Towers
6420 Prospect
Kansas City, MO 64132
816-361-3988
McDonald, Herbert L TS
6700 Troost
Suite 346 Rockhill Med
Kansas City, MO 64131
816-942-0007
McDonnell, John F IM
4320 Wornall 440 Med Plaza
Kansas City, MO 64111
816-753-3243
McFarland, H. R. N
4320 Wornall #620 Med Plaza
Kansas City, MO 64111
816-561-4611
McCuire, Thomas H OBC
Suite T307 6420 Prospect
Kansas City, MO 64132
816-361-4747
McCurk, Thomas E P
Care Psych Unit
6602 Rockhill Rd.
Kansas City, MO 64131
McIntosh, Donald E AN
300 S. W. Creen Teal
Lee's Summit, MO 64063
816-537-7344
McIntosh, Michele C PD
11200 Winner Rd.
Independence, MO 64052
816-836-4300
McIntyre, John D AN
4948 Westwood Rd
Kansas City, MO 64112
816-753-2185
McKee, Wallace P IM
St. Luke's Lenexa Clinic
8704 Bourgade
Lenexa, KS 66219
McKeel, Thos B IM
615 Highland Prof
6724 Troost
Kansas City, MO 64131
816-444-9348
McKinley, Lois J IM
Suite 350 1000 E. 50th St.
Kansas City, MO 64110
816-361-9615
McKinsey, David S ID
2316 E. Meyer Blvd.
Kansas City, MO 64132
816-276-4038
McKnelly, Wm V P
Dept of Psych KUMC
39th & Rainbow Blvd.
Kansas City, KS 66103
816-588-6493
McLaughlin, Durnell OPH
1000 E. 50th St. #210
Kansas City, MO 64110
816-361-1515
McLean, Terry E ORS
6650 Troost Suite 103
Kansas City, MO 64131
816-444-4664
McLemore, Willie O IM
6700 Troost #408
Kansas City, MO 64131
816-523-5660
McLeod, Alan J R
Suite 7110 4320 Wornall Rd.
Kansas City, MO 64111
816-932-2550
McMeekin, Sheila P PTH
St. Joseph Health Center
1000 Carondelet Drive
Kansas City, MO 64108
McMurray, Earlene H ONC
6400 Prospect Suite 240
Kansas City, MO 64132
816-363-2677
McMurray, Timothy 1 IM
6400 Prospect Suite 238
Kansas City, MO 64132
McNitt, Jay D AN
St. Lukes Hosp Anes Dept
4400 Wornall
Kansas City, MO 64111
816-932-2033
McPhee, Mark S IM
4320 Wornall Rd. Suite 332
Kansas City, MO 64111
816-561-2000
McVey, Pamela S EM
3101 Broadway #1000
Kansas City, MO 64111
816-561-1025

Medley, Benjamin E DR
1010 Carondelet Dr
Suite 114
Kansas City, MO 64114
816-942-6900
Medlicott, William J ORS
611 Polk
Port Townsend, WA 98366
Meegan, Robt J R
340 Penn Park Med. Ctr.
2928 Baltimore
Kansas City, MO 64108
816-756-1050
Meiklejohn, Duncan C OBC
1900 Copper Oaks Circle
Blue Springs, MO 64015
816-226-9331
Melgaard, Sven R AN
12887 Cambridge Circle
Leawood, KS 66209
913-642-0545
Melia, B J Jr. D
216 Carondelet Medical Bldg.
1010 Carondelet Dr.
Kansas City, MO 64114
816-942-4336
Mertz, Janet S OTO
6724 Troost Ave. #208
Kansas City, MO 64131
816-361-6013
Mested, Peter H AN
Anesthesia Associates
6400 Prospect Suite 138
Kansas City, MO 64132
816-444-1139
Meyer, Paul W ORS
610 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-5757
Michelson, Richard B CPM
Blue Cross & Blue Shield
2301 Main St.
Kansas City, MO 64108
Miles, Ceo O CS
37 Compton Ct.
Shawnee Mission, KS 66208
Milgram, Byron A P
6724 Troost #607
Kansas City, MO 64131
816-444-5161
Miller, Cayle P TR
Deweese Radiology Group
2929 Baltimore #340
Kansas City, MO 64108
816-756-1050
Miller, Cerald L Jr. OBC
Research Off Towers Bldg
T301 6420 Prospect
Kansas City, MO 64132
816-444-6886
Miller, John T CD
2929 Baltimore Suite 415
Kansas City, MO 64108
816-756-0695
Miller, Michael R IM
Samuel U. Rogers Hlt Ctr.
825 Euclid Ave.
Kansas City, MO 64124
816-474-4920
Miller, Wilson H IM
6420 Prospect Ave.
Suite T 305
Kansas City, MO 64132
616-444-4114
Millet, Ruth E PTH
4949 Rockhill Road
Kansas City, MO 64110
816-276-8262
Minnigerode, Lana K PM
10950 Glen Arbor Road
Kansas City, MO 64114
816-942-4393
Minnigerode, Turner L IM
Research Hosp. & Med. Ctr.
2316 E. Meyer Blvd.
Kansas City, MO 64132
816-276-4167
Mir, A. Rauf NEP
1000 E. 50 #405
Kansas City, MO 64110
816-444-4806
Mitchell, Andrew D U
4013 West 73rd Terrace
Prairie Village, KS 66208
Mitchell, John D U
2900 Baltimore Suite 540
Kansas City, MO 64108
816-561-7414
Mitchell, Mark A CPM
414 E. 12th St
KC,MO Health Dept
Kansas City, MO 64106
816-274-1381
Mitchell, Nevada A IM
6306 Morningside Dr.
Kansas City, MO 64113
616-444-2525

---

*Doctor of osteopathy.

Mitchell, Robt H OBG
1006 Grand Ave.
Suite 1134
Kansas City, MO 64106
816-471-1330
Mitra, Nirmal K PD
11201 Colorado
Kansas City, MO 64137
816-761-0775
Mittleman, Frederick S P
4205 W. 102 St.
Overland Park, KS 66207
Mongan, James J OS
Truman Medical Center
2301 Holmes
Kansas City, MO 64108
816-556-3153
Monroe, Alicia D FP
2900 Baltimore Suite 400
Kansas City, MO 64108
816-756-1222
Montello, Samuel A GYN
10600 Quivira Road
Overland Park, KS 66215
913-541-3200
Montgomery, Michael A CD
2929 Baltimore Suite 415
Kansas City, MO 64108
816-756-0695
Mooney-Smith, Patricia OBG
2700 N. Hospital Dr. 360
Kansas City, MO 64116
816-421-3115
Moore, David L GS
4400 Broadway
Kansas City, MO 64111
816-753-4404
Moore, Jack D U
4320 Wornall Rd
Kansas City, MO 64111
816-753-2033
Moore, Joan Prouty FP
8600 Ward Parkway
Kansas City, MO 64114
816-941-0800
Moore, John M IM
Suite 238-6400 Prospect
Kansas City, MO 64132
816-363-4114
Morantz, Robert A N
Research Med Off Tower T411
6420 Prospect
Kansas City, MO 64132
816-363-2500
Morest, F S IM
5795 La Pinata Blvd. #212 B2
Lake Worth, FL 33463
305-964-8510
Morgan, David B D
4620 J C Nichols Pkwy #513
Kansas City, MO 64112
816-561-2200
Morris, Barbara A PD
Suite 138 6400 Prospect
Kansas City, MO 64132
816-444-1139
Morris, J H IM
4240 Blue Ridge Blvd
Kansas City, MO 64133
816-356-8877
Morris, Terry V OBG
1515 W. Truman Rd.
Independence, MO 64050
816-836-4200
Morrison, Donald H AN
1412 Lynwood Ct.
Liberty, MO 64068
816-781-0045
Morrison, Richard A TR
17525 Medical Center Park
Independence, MO 64057
816-373-2700
Mosbacher, Hugh E PS
109 Ironbark Lakewood
Lee's Summit, MO 64063
816-373-7493
Moss, Paul IM
8701 Walmer Dr.
Shawnee Mission, KS 66212
Muelleman, Peter J D
17421 Medical Center Parkway
Independence, MO 64057
816-478-1830
Mueller, Martin J IM
11723 Central
Kansas City, MO 64114
Muller, Milton PS
1132 Luttrell Suite B
Blue Springs, MO 64015
816-228-3069
Mundy, William L IM
5905 Slater
Merriam, KS 66202
913-631-4365
Munger, Michael L FP
Hickman Mills Clinic
11201 Colorado
Kansas City, MO 64137
816-763-5200

Munyan, Earl A IM
17221 E. 23rd St.
Suite 309
Independence, MO 64057
816-373-1122
Murphy, Everett M III PUD
545 Penn Park
2929 Baltimore
Kansas City, MO 64108
816-561-6277
Murphy, John P PDS
Suite 509 4400 Broadway
Kansas City, MO 64111
816-931-5538
Mutchnick, Norman GS
6724 Troost
Suite 910
Kansas City, MO 64131
816-333-2000
Myers, Carl M FP
Platte Medical Clinic
P. O. Box 980
Platte City, MO 64079
816-464-2313
Myers, Geo H U
1010 Carondelet Dr
Kansas City, MO 64114
816-942-4243
Myers, John S FP
425 Huntington Rd
Kansas City, MO 64113
816-444-4334
Myron, Mark C ONC
1016 W. 69th Terr.
Kansas City, MO 64113
816-361-5208
Naime, Mansour J PD
136 Rockhill Med Bldg
6700 Troost
Kansas City, MO 64131
816-363-3337
Namnum, Peter A PUD
8919 Parallel Pkwy Suite 206
Kansas City, KS 66112
816-333-1919
Navato, Jose R P
3624 Blue Jacket Dr.
Lee's Summit, MO 64064
Neighbor, Ernest H ORS
2929 Baltimore Suite 500
Kansas City, MO 64108
816-561-3003
Neihart, Robert E IM
4620 JC Nichols Parkway #415
Kansas City, MO 64112
816-531-0552
Nelson, Bentley A OTO
11208 Granada Lane
Leawood, KS 66211
Nelson, Paul W GS
4320 Wornall Suite 308
Kansas City, MO 64111
816-753-7460
Nelson, Richard E AN
Dept Of Anesthesia St. Lukes
4400 Wornall Rd.
Kansas City, MO 64111
816-932-3652
Nesselrode, John H GS
1515 W Truman Rd
Ste 402
Independence, MO 64050
816-254-9292
Newman, Robt I OBG
4909 Wyandotte
Kansas City, MO 64112
816-753-3358
Nicholls, G. Ronald PD
2000 N. E. Vivion Road
Kansas City, MO 64118
816-452-6620
Nickell, Margaret B OBG
4320 Wornall Rd. Suite 520
Kansas City, MO 64111
816-531-9400
Nieman, John L PD
9801 Juniper Lane
Overland Park, KS 66207
Nigro, Thomas L GS
930 Carondelet Dr. Suite 101
Kansas City, MO 64114
Noback, Richardson K IM
UMKC School Of Med
2411 Holmes
Kansas City, MO 64108
816-276-1800
Noltensmeyer, Milton H AN
3305 W 50th Terr
Shawnee Mission, KS 66205
913-236-6973
Nulton, Carnie C IM
Suite T101 6420 Prospect
Kansas City, MO 64132
816-363-4100
O'Farrell, Thos P GS
Suite T505
6420 Prospect
Kansas City, MO 64132
816-361-3988

O'Hearne, John J P
4706 Broadway Suite #103
Kansas City, MO 64112
816-531-7020
O'Keefe, James H Jr. IM
4320 Wornall Rd.
Medical Plaza II-20
Kansas City, MO 64111
816-931-1883
O'Kell, Richard T PTH
St Lukes Hosp Dept Path
44th & Wornall Rd
Kansas City, MO 64111
816-932-2411
O'Malley, James F U
2117 W. 120th St.
Leawood, KS 66209
816-333-9939
O'Neil, James H GS
275 Tait Terrace S.E.
Port Charlotte, FL 33952
Oleson, Gale B D
100 NW Mock Ave. #201
Blue Springs, MO 64015
816-228-9009
Olson, Lloyd C PD
24th And Gillham Rd
Childrens Mercy Hosp
Kansas City, MO 64108
816-234-3370
Ommen, Shari L FP
2900 Baltimore Suite 400
Kansas City, MO 64108
816-756-1222
Opper, Susan E AN
St. Luke's Hospital
44th & Wornall Rd.
Kansas City, MO 64111
816-932-2033
Oppermann, Karen J PD
4916 Milton Circle
Independence, MO 64055
816-373-0876
Osgood, Brian M IM
4240 Blue Ridge Blvd. #500
Kansas City, MO 64133
913-381-4100
Ost, Mark D PTH
6550 B Troost
Kansas City, MO 64131
816-333-7888
Ostergaard, Daniel J FP
8880 Ward Parkway
Kansas City, MO 64114
816-333-9700
Overesch, Harry B ORS
6400 Prospect Ave Suite 200
Kansas City, MO 64132
816-363-2202
Owens, James L OBG
302 Broadway Med. Bldg
4400 Broadway
Kansas City, MO 64111
816-753-2223
Owens, Robt H U
6675 Holmes Suite 420
Kansas City, MO 64131
816-333-9939
Ozar, Milton B U
Rockhill Med. Plaza N.
6650 Troost Suite 206
Kansas City, MO 64131
816-333-5433
Padula, Richard T TS
Suite T211 Research Med. Off
6420 Prospect Ave.
Kansas City, MO 64132
816-523-8120
Pakula, Sidney F PD
4545 Wornall Road Apt 311
Kansas City, MO 64111
816-753-6628
Palazola, Joseph M IM
1500 NE Parvin Road
Kansas City, MO 64116
Panek, Judy L IM
9807 Eastern
Kansas City, MO 64134
Paone, Douglas B IM
6420 Prospect
Suite T101
Kansas City, MO 64132
816-363-4100
Paradelo, Jorge C TR
6400 Prospect Suite 240
Kansas City, MO 64132
Parelman, Allen G OPH
303 Highlands Prof Tower
6724 Troost Ave.
Kansas City, MO 64131
816-523-9066
Parker, Craig A AN
Anesthesia Associates KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139
Parker, Joseph C Jr PTH
Dept of Pth 2301 Holmes
Kansas City, MO 64108
816-556-3212

---

*Doctor of osteopathy.

Parker, Kim E AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139

Parkins, George K ORS
500 Penn Park
2929 Baltimore
Kansas City, MO 64108
816-561-3003

Parrish, Steven T EM
5421 Foxridge Dr. Apt 302
Mission, KS 66202
913-262-3719

Paschino, Antonio R P
298 Mojave St. West
Lake Quivira, KS 66106
816-268-5586

Pattison, Charles P GE
Suite 550
2929 Baltimore
Kansas City, MO 64108
816-371-7221

Pawsat, John E ORS
432 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
913-722-2161

Peete, Don C CO
4525 Cove Circle #908
St. Petersburg, FL 33708
913-341-1158

Pendell, Paul W GS
501 Bowen Dr.
Raymore, MO 64083
816-322-1825

Pendergrass, Kelly B ON
6420 Prospect
Suite T101
Kansas City, MO 64132
816-363-4100

Perll, Maurice F Jr. ORS
830 W. 61st Terr.
Kansas City, MO 64113
816-333-1176

Perll, Rita O CHP
Child Psy Childrens Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3213

Perryman, John C IM
4400 Broadway
Suite 316
Kansas City, MO 64111
816-756-2520

Petersen, Eugene G R
108 Hackberry (Lakewood)
Lee's Summit, MO 64063
816-373-1253

Peterson, Carl M GS
2701 E 31st St
Kansas City, MO 64128
816-861-2300

Peterson, Jay T HEM
4320 Wornall Rd
Suite 212
Kansas City, MO 64111
816-531-0930

Peterson, Walter R GS
3934 Benton Blvd.
Kansas City, MO 64130
816-923-7157

Pfeffer-Hurwitz, Judith CHP
Suite 202 4400 Broadway
Kansas City, MO 64111
816-561-2025

Philgreen, Donald E FP
The Light House
1409 E. Meyer Blvd.
Kansas City, MO 64131
816-361-2233

Phillips, Thomas P ORS
610 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-5757

Pickard, Nicholas S ORS
6210 High Dr
Shawnee Mission, KS 66208
913-362-7021

Pickering, Lee I IM
1515 W Truman Rd. Suite 301
Independence, MO 64050
816-836-8130

Piebenga, Larry W OPH
4400 Broadway
Kansas City, MO 64111
816-561-1136

Piehler, Jeffrey M TS
4320 Wornall Road, Ste 50-II
Kansas City, MO 64111
816-931-7743

Pinkerton, Joseph A Jr. TS
308 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-753-7460

Piper, Donald K ORS
1010 Carondelet Dr. #426
Kansas City, MO 64114
816-941-0200

Place, Kenneth C OPH
130 Penn Park
2928 Main
Kansas City, MO 64108
816-756-1236

Plapp, Frederick V PTH
St. Lukes/Laboratory Med.
44th at Wornall Rd.
Kansas City, MO 64111
314-753-4040

Pogson, George W III IM
22807 E. Ashford Ct.
Blue Springs, MO 64015
314-461-6837

Politi, Gregory B AN
3621 Wyncote Lane
Shawnee Mission, KS 66205
913-384-1507

Pompushko, Rosalie P
4706 Broadway Suite 105
Kansas City, MO 64112
816-531-3686

Poonawala, Huseni E CHP
11201 Colorado
Kansas City, MO 64137
816-763-1700

Porter, Charles E IM
Suite 40 II - 4320 Wornall
Kansas City, MO 64111
816-531-5510

Porter, Louis AN
1000 E. 50th #340
Kansas City, MO 64110
816-333-7484

Porter, Michael J AN
6925 Belinder
Shawnee Mission, KS 66208
913-384-3688

Porter, Walter N Jr. FP
12745 W. 76th St.
Lenexa, KS 66216
913-921-6000

Postma, George S Jr. IM
8901 W. 74th St. #333
Shawnee Mission, KS 66204
914-262-9311

Potts, Donald A FP
Truman Medical Center East
7900 Lee's Summit Rd.
Kansas City, MO 64139
816-373-4415

Powell, Alan E PO
17221 E. 23rd St. Suite 210
Independence, MO 64057

Powers, Catherine A AN
7478 Village Drive
Prairie Village, KS 66208
816-444-1139

Prather, Charlene M IM
35 East 62nd Terrace
Kansas City, MO 64113
816-444-9639

Printz, Jos H GS
820 W. 64th Terrace
Kansas City, MO 64113
816-333-5005

Pro, John O P
6400 Prospect Suite 100
Kansas City, MO 64132
816-523-0103

Prochaska, Mark L P
6400 Prospect Suite 100
Kansas City, MO 64132
816-523-0103

Prostic, Edward J ORS
6724 Troost Suite 800
Kansas City, MO 64131
816-333-1700

Pryor, Harold J PM
EMG Laboratory
6420 Prospect Ste T503
Kansas City, MO 64132
816-361-8684

Psaltis, Phillip E IM
9713 N. Virginia
Kansas City, MO 64155

Pugh, Richard G PO
H27 N. Lake Shore Drive
Lake Lotawana, MO 64063
816-578-4832

Quer, Erich A GS
1802 Regency House
221 W. 48th St.
Kansas City, MO 64112
816-756-0021

Quiason, Arturo G P
Suite 206
17221 E. 23rd St.
Independence, MO 64057
816-373-1911

Quiason, Emmeline P CHP
Suite 206
17221 E. 23rd St.
Independence, MO 64057
816-373-1911

Quick, Annette M IM
214 E. Armour Blvd. Apt. 507
Kansas City, MO 64111
816-753-4030

Quick, William W END
6700 Troost Suite 324
Kansas City, MO 64131
816-361-0222

Racela, Antonio S Jr. PTH
912 Burning Tree
Kansas City, MO 64145
816-492-1000

Rader, Ada E GP
13414 Locust St
Kansas City, MO 64145
816-942-0732

Raible, Michele O IM
Truman Medical Center
2301 Holmes
Kansas City, MO 64108

Raich, Robt A IM
4320 Wornall Rd Rm 440
Kansas City, MO 64111
816-753-3243

Ramey, Ehret O OBG
8108 Ward Parkway Plaza
Kansas City, MO 64114

Ramos, Americo G TS
2700 W. 69th
Mission Hills, KS 66208

Ratnam, Dasari V P
6448 Verona Rd.
Shawnee Mission, KS 66208
913-262-3489

Raybould, Michael W IM
Suite 415 2929 Baltimore
Kansas City, MO 64108
816-756-0695

Rayford, Cleveland E IM
Samuel U. Rodgers Health Ctr
825 Euclid
Kansas City, MO 64124
816-474-4920

Rector, Joe L TR
3915 W. 53rd St.
Shawnee Mission, KS 66205
816-432-5922

Reddy, Sarvotham K GS
6225 Raytown Trwy 81 2607
Kansas City, MO 64133
816-353-7744

Reed, Wm A TS
Medical Plaza II 50
4320 Wornall Rd.
Kansas City, MO 64111
816-931-7743

Reinhardt, John R TS
2929 Baltimore
Kansas City, MO 64108
816-531-0118

Reiss, Jeanne E N
Ste 400 Highlands Prof Tower
6724 Troost
Kansas City, MO 64131
816-444-4082

Peister, Dorothy O PD
5201 W 84th
Shawnee Mission, KS 66207
913-649-3429

Peister, Philip O GS
Suite 705
6724 Troost
Kansas City, MO 64131
816-523-2119

Rengachary, Dhanalakshmi OBG
320 Chelmsford Ct.
Lee's Summit, MO 64064

Renner, John H FP
300 E. Pink Hill Rd.
Independence, MO 64057

Reynolds, Clarence C IM
2941 Country Club Drive
Jefferson City, MO 65109
314-893-7694

Rhoades, Charles E ORS
Suite 610 4320 Wornall Rd.
Kansas City, MO 64111
816-531-5757

Rhoads, Jack V IM
900 Main St.
Grandview, MO 64030
816-761-5588

Rhodes, Philip G PO
Childrens Mercy Hosp
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3805

Ricci, Walter F P
6724 Troost
Kansas City, MO 64131
816-361-0899

Richards, Dean O III IM
1010 Carondelet
Kansas City, MO 64114
816-942-6252

Richardson, Lloyd O PTH
Dept Of Pathology
2316 E. Meyer Blvd
Kansas City, MO 64132
816-276-4071

---

*Doctor of osteopathy.

Richardson, Marion W   OBG
2526 Prospect
Kansas City, MO 64127
816-923-9600

Richert, Robt C   PTH
504 W 96th St
Kansas City, MO 64114
816-942-0297

Rigdon, John F   AN
6601 Rockhill Rd.
Box 11316
Kansas City, MO 64112
816-276-7901

Rigolosi, Ronald A   IM
373 W 101st Terrace
Kansas City, MO 64114
816-942-8200

Riley, J P   R
Parthenon, AR 72666

Riller, Lowell E   ORS
1267 W 61
Kansas City, MO 64113
816-333-5542

Rippey, John H   PTH
St. Luke's Hospital Lab.
44th And Wornall Rd.
Kansas City, MO 64111
816-932-2411

Robb, Christine A   FP
13010 White Ave. Suite A
Grandview, MO 64030
816-765-1080

Roberts, Charles C   PD
Childrens Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3016

Roberts, Fred F   PDR
Dept Of Rad St. Joseph Hosp
1010 Carondelet Drive
Kansas City, MO 64114
816-942-6900

Roberts, Grosvenor G   OM
S-1 Route 1
Lake Latawana, MO 64063
816-578-4210

Robinett, Wade V   OTO
6700 Troost
604 Rockhill Med. Bldg.
Kansas City, MO 64131
816-444-9408

Robinson, Arthur W   IM
4320 Wornall Rd
Kansas City, MO 64111
816-531-0552

Robinson, Ernest K   GS
1015 W 58th Terr
Kansas City, MO 64113
816-333-0438

Robinson, William J   PD
Suite 350 2700 Hospital
N Kansas City, MO 64116
816-234-3000

Robinson, Wm J   P
9931 Lee Circle
Shawee Mission, KS 66206
913-648-2494

Rodgers, George H   U
Suite T417 6420 Prospect
Kansas City, MO 64132
816-333-6403

Rodgers, Saml U   OBG
Wayne Miner Hlth. Ctr.
825 Euclid
Kansas City, MO 64124
816-474-4920

Roedel, Kathryn R   IM
Suite 7 17500 Medical Center
Independence, MO 64057
816-556-3482

Rofail, Amin A   AN
9206 England
Shawnee Mission, KS 66212
913-341-7091

Rogers, Robt L   OTO
T401 6420 Prospect
Kansas City, MO 64132
816-361-5858

Roloson, Gary J   PTH
Arkansas Childrens Pth Dept
800 Marshall
Little Rock, AR 72202

Romain, Rolande C   PD
6025 Prospect Suite 201
Kansas City, MO 64130
816-333-3112

Romig, Laurie A   EM
427 E. Minor
Kansas City, MO 64131
816-941-2511

Rope, Douglas M   IM
373 W. 101st Terr.
Kansas City, MO 64114
816-942-8200

Rosen, Larry A   IM
Suite 500
4240 Blue Ridge Blvd.
Kansas City, MO 64133
816-356-8877

Ross, Robert M   IM
751 E. 63 3rd Floor
Kansas City, MO 64110
816-333-6640

Roth, Alfred D   AN
P.O. Box 11316
Kansas City, MO 64112
816-276-7901

Rowe, Vernon D III   N
4320 Wornall Rd. Suite 452
Kansas City, MO 64111
816-753-8800

Rozen, Jay I   R
6400 Prospect
Suite 310
Kansas City, MO 64132

Rubnitz, Leon H   AN
210 W. 94th St.
Kansas City, MO 64114
816-361-4911

Rues, Lawrence A   FP
Goppert Family Care Center
6601 Rockhill Rd
Kansas City, MO 64131
816-276-7600

Russell, James L   TS
330 Penn Park Bldg
2929 Baltimore
Kansas City, MO 64108
816-531-0118

Russell, Robt K   FP
8933 Rose Lane
Kansas City, MO 64133
816-353-0036

Rutherford, Barry D   CD
Medical Plaza II #20
4320 Wornall Rd.
Kansas City, MO 64111
816-931-1883

Rymer, Marilyn M   N
4320 Wornall Rd. Suite 220
Kansas City, MO 64111
816-531-4599

Ryser, Carol A   PD
Matrix
7447 Holmes
Kansas City, MO 64131
913-661-9411

Sabates, Felix N   OPH
300 Rockhill Medical Plaza N
6650 Troost Ave.
Kansas City, MO 64131
816-333-7376

Sabates, Roland   OPH
300 Rockhill Medical Plaza N
6650 Troost Ave.
Kansas City, MO 64131
816-333-7376

Saferstein, A L   AN
8308 Somerset
Shawnee Mission, KS 66207
913-381-1441

Safley, Thos J   GS
17221 E 23rd St
Independence, MO 64057
816-373-4646

Saldana, Dahlia   IM
9205 E. 40th Highway
Independence, MO 64055
816-737-3399

Salvaggio, Bruce H   IM
Medical Plaza Building
4320 Wornall Suite 312
Kansas City, MO 64111
816-931-6220

Samuelson, Edward A   FP
706 W 112th St
Kansas City, MO 64114
816-942-3092

Sand, John J   N
Suite 316 6400 Prospect
Kansas City, MO 64132
816-363-2559

Sanders, Donald C   P
6400 Prospect Suite 312
Kansas City, MO 64132
816-363-5554

Sanders, Wm F   IM
Bendix Corp.
P.O.Box 419159
Kansas City, MO 64141

Sandow, Theodore L   ORS
4320 Wornall Rd
Kansas City, MO 64111
816-753-5102

Santoro, Carlos G   GS
1103 Westport Rd
Kansas City, MO 64111
816-753-1568

Sarwark, John F   ORS
Dept of Orthopaedic Surgery
2300 Children's Place
Chicago, IL 60614

Satterlee, C. Craig   ORS
500 Penn Plaza Med
2929 Baltimore
Kansas City, MO 64108

Sauer, Gordon C   D
6400 Prospect Suite 338
Kansas City, MO 64132
816-444-5601

Scanlon, Charlotte D   IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-531-3066

Scarborough, Betty F   EM
11274 Hemlock
Shawnee Mission, KS 66210
816-587-2308

Scarborough, Mark R   EM
11274 Hemlock
Shawnee Mission, KS 66210
816-451-3185

Scharf, Daniel   CD
4949 Rockhill Rd
Menorah Medical Ctr
Kansas City, MO 64110
816-276-8260

Scherer, Stephen   IM
Kansas City Internal Med.
Ste T 101 6420 Prospect
Kansas City, MO 64132
816-363-4100

Schiffmacher, Jack E   R
4517 W 65th St
Prairie Village, KS 66208
913-831-1319

Schillie, Gene A   OBG
T301 Research Med. Bldg.
6420 Prospect
Kansas City, MO 64132
816-444-6888

Schlozman, Danl L   PUD
Suite T 303
6420 Prospect
Kansas City, MO 64132
816-333-1919

Schmidt, Thomas L   ORS
The Children's Mercy Hosp.
24th At Gillham Rd.
Kansas City, MO 64108
816-234-3693

Schoolman, Arnold   NS
8705 Catalina
Shawnee Mission, KS 66207
816-381-1657

Schottman, Gerhard W   R
710 Medical Plaza
4320 Wornall Rd.
Kansas City, MO 64111
816-531-9481

Schutz, Richard B   OBG
John Knox Village Care Ctr
Room 202 500 N. Murray
Lee s Summit, MO 64063

Schwartz, Howard I   OBG
6420 Prospect Suite T107
Kansas City, MO 64132
816-361-3640

Schwegler, Robert G   DR
10235 Catalina
Shawnee Mission, KS 66207
913-649-1924

Seely, Clark W   PD
3000 W 68th St
Shawnee Mission, KS 66208
913-362-6450

Seiden, Gerald D   OTO
6724 Troost
Suite 208
Kansas City, MO 64131
816-361-6013

Seitz, Elson F   PTH
1509 W Truman Rd Clinic
Independence, MO 64050
816-836-8100

Sells, Kenneth J   FP
2900 Baltimore Ste 400
Kansas City, MO 64108
816-756-1222

Seshumurty, Ponnuru   PD
Prime Health
373 West 101st Terr.
Kansas City, MO 64114
816-942-8200

Seshumurty, Vimala   PD
4812 W. 90th St.
Prairie Village, KS 66207

Shaffer, Stanley G   PD
Childrens's Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3591

Shalet, Malcolm F   IM
6675 Holmes Suite 440
Kansas City, MO 64131
816-363-5662

Shapiro, Lazare M   IM
10933 Crestbrook
Sun City, AZ 85373

Sharma, Janardana N   NEP
208 Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
816-531-0552

Sharma, Vidya   PD
Children's Mercy Hosp
24th & Gillham Rd
Kansas City, MO 64108
816-234-3684

---

*Doctor of osteopathy.

Sharp, Ronald J PDS
Suite 509 4400 Broadway
Kansas City, MO 64111
816-931-5538
Sharp, Stanley P IM
5209 W. 68th St.
Shawnee Mission, KS 66208
913-722-4629
Sheahon, John A OBG
6700 Raytown Rd
Raytown, MO 64133
816-358-5300
Shechter, Nathan ORS
800 Highlands Prof Tower
6724 Troost
Kansas City, MO 64131
816-333-1700
Sheehan, Michael B PD
2808 W. 50th Terrace
Shawnee Mission, KS 66205
816-384-1206
Shelden, Russell D AN
816 West 58th Terrace
Kansas City, MO 64113
816-333-0248
Shelley, William C AN
Suite 138 - 6400 Prospect
Kansas City, MO 64132
816-444-1139
Sherman, Neal J IM
5530 Colllege Blvd. #240
Overland Park, KS 66211
Sheverini, James A TS
Medical Plaza II 50
4320 Wornall Rd
Kansas City, MO 64111
816-931-7743
Shifrin, Alexander CD
6700 Troost Ave
Kansas City, MO 64131
816-444-2100
Shockley, Clarence J OBG
615 W 3rd St
Lee's Summit, MO 64063
816-524-3799
Shuey, Herbert H GP
5339 W. 96th St.
Shawnee Mission, KS 66207
816-363-3011
Shuler, Frederick N GE
6650 Troost #108
Kansas City, MO 64131
816-523-2300
Siegel, Carl D PTH
11116 Glen Arbor Terrace
Kansas City, MO 64114
Simmons, Donald D P
2900 Baltimore
Suite 380
Kansas City, MO 64108
816-753-1468
Simmons, John L U
6400 Prospect Ave. St. 120
Kansas City, MO 64132
Singleton, John M III IM
Suite 310 4400 Broadway
Kansas City, MO 64111
816-531-0288
Sinnett, Mark F IM
Little Blue & Lee Summit Rd.
Truman Medical Center E
Kansas City, MO 64139
816-373-4415
Sirridge, Marjorie J HEM
2411 Holmes
Kansas City, MO 64108
816-276-1855
Skillman, Robt K HEM
4320 Wornall Rd
Kansas City, MO 64111
816-753-4312
Skinner, John T GP
1238 W. 65th St.
Kansas City, MO 64113
816-333-1566
Slankard, J E OBG
4320 Wornall Rd.
Kansas City, MO 64111
816-753-6010
Slentz, Edwin L IM
4812 West 66th Terrace
Shawnee Mission, KS 66208
Slentz, Wm A IM
9835 Pembroke
Shawnee Mission, KS 66206
816-381-3010
Sly, Anne K IM
Midtown MediCenter
2 E. 39th St.
Kansas City, MO 64111
816-561-7800
Smith, Arthur B R
8409 Wenonga Rd
Shawnee Mission, KS 66206
913-648-3754
Smith, C. Byron III OPH
4177 Broadway
Kansas City, MO 64111
816-753-5599
Smith, David Lambuth ID
2316 E Meyer Blvd.
Kansas City, MO 64132
816-276-3979
Smith, Elbert E PD
206 Broadway Med. Bldg.
4400 Broadway
Kansas City, MO 64111
816-561-8100
Smith, Hubert E IM
Suite 338 6400 Prospect
Kansas City, MO 64132
816-444-4958
Smith, Katherine W PD
Children's Mercy Hospital
24th And Gillham Rd.
Kansas City, MO 64108
816-234-3054
Smith, O. Dale PTH
Suite 300 4400 College Blvd.
Overland Park, KS 66211
Smith, Reid C IM
1515 W. Truman Rd. Ste. 504
Independence, MO 64050
816-474-6690
Smith, Wallace B OPH
Central Prof. Bldg.
Box 1059
Independence, MO 64051
Snavely, Sharon R IM
6724 Troost Suite 710
Kansas City, MO 64131
816-333-6000
Sneid, David S END
Suite 550
2900 Baltimore
Kansas City, MO 64108
816-756-1234
Sotiropoulos, George P PD
Childrens Mercy Hospital
24th at Gillham
Kansas City, MO 64108
816-234-3886
Spake, R. Vanneman OTO
4320 Wornall Road Suite 422
Kansas City, MO 64111
816-531-4777
Spalding, Wilber B Jr. OPH
2928 Main St
Kansas City, MO 64108
816-756-1236
Spaulding, Kenneth A GS
3800 Locust St.
Kansas City, MO 64109
816-861-2300
Speckman, Jerry M DR
6400 Prospect Suite 310
Kansas City, MO 64132
816-523-2400
Spencer, Donald M ORS
4240 Blue Ridge Blvd
Kansas City, MO 64133
816-356-3100
Spies, Barbara J GP
P. O. Box 10
Louisburg, KS 66053
913-837-2694
Spurney, Joe E FP
11201 Colorado
Kansas City, MO 64137
816-763-5200
Spurny, Otto M CD
6675 Holmes Suite 440
Kansas City, MO 64131
816-363-5662
Staab, Gerald E R
6650 Troost Suite 210
Kansas City, MO 64131
816-363-5606
Stacey, Wallace R OBG
17500 Med Ctr Pky Suite 3
Independence, MO 64057
816-478-0220
Stahl, Lloyd D IM
4949 Rockhill Rd.
Kansas City, MO 64110
816-276-8260
Stanford, Carol A IM
373 W. 101st Terrace
Kansas City, MO 64114
816-942-8200
Stanley, Charles G OM
Richard Cabot Clinic
1810 W. 38th St.
Kansas City, MO 64111
816-561-5588
Stanley, John H CHP
4520 Madison Suite 303
Kansas City, MO 64111
816-531-2900
Stanton, Danny K IM
Kaiser Permanente
87th & Hillcrest
Kansas City, MO 64138
Starks, Gregory C OBG
6400 Prospect
Suite T107
Kansas City, MO 64132
816-361-3640
Stass-Isern, Merrill L OPH
13803 Woodward
Overland Park, KS 66223
Statland, Harry IM
400A W 11th St.
Kansas City, MO 64105
816-561-1441
Statland, Morris CD
400 A. W. 11th St.
Kansas City, MO 64105
Steffen, Lawrence F CD
9606 Nieman Place
Shawnee Mission, KS 66214
913-888-2502
*Steinbrecher, Janis M IM
506 N.W. Murray Rd.
Lee's Summit, MO 64063
816-525-4400
Steinhaus, David M CD
Suite II-20 4320 Wornall
Kansas City, MO 64111
816-931-1883
Stelmach, Walter J FP
5252 Sunset Dr
Kansas City, MO 64112
816-444-1410
Stephens, Jack D AN
2400 RD Mize Road
Independence, MO 64057
Stephenson, Robert E DR
Suite 340 2928 Main
Kansas City, MO 64108
816-756-1050
Stern, Thomas L FP
P. O. Box 8418
Kansas City, MO 64114
Stewart, Harry A P
4706 Broadway Ste 105
Kansas City, MO 64112
816-531-3686
Stiaszny, Louis K PD
9150 E. 41st. Terrace
Kansas City, MO 64133
816-356-5000
*Stillie, G. Donald ONC
P. O. Box 22608
Kansas City, MO 64113
816-942-6850
Stitt, Ronald W Jr. ORS
373 W. 101st Terrace
Kansas City, MO 64114
Stockton, Raymond W U
5215 W. 81st St.
Shawnee Mission, KS 66208
*Stoddard, James M IM
3675 Jefferson
Kansas City, MO 64111
816-753-3642
Stone, Mary K OBG
1900 Copper Oaks Cir
Blue Springs, MO 64015
Stout, Carl N OPH
Suite 100 4801 Cliff Ave.
Independence, MO 64055
816-478-1230
Stratemeier, Edward H R
1705 Weatherton
Blue Springs, MO 64015
816-229-6316
Strauss, Carl F IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-363-7710
Stribling, Thos L OBG
17500 Med Ctr Parkway Ste 3
Independence, MO 64057
816-478-0220
Stromberg, Eric D AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139
Suarez, Alberto FP
2909 SW 11th
Lee's Summit, MO 64081
Sublette, Glen L N
6724 Troost Suite 400
Kansas City, MO 64131
816-444-4082
Suddarth, Sterling B PD
c/o Harvey Mimms
6214 Valley Rd.
Kansas City, MO 64113
Sulit, Arnulfo P IM
2900 Baltimore Bldg Ste 590
Kansas City, MO 64108
Sullivan, Bradley H OBG
Suite T 301 6420 Prospect
Kansas City, MO 64132
816-444-6888
Sullivan, Christine EM
Humana Hosp-Overland Park
I-435 at Quivira Rd.
Overland Park, KS 66215
816-363-1993
Suseela, Dasari PD
4900 Swope Pkwy
Kansas City, MO 64130
816-923-5800

---

*Doctor of osteopathy.

Susman, Lisa IM
5203 Skyline Dr.
Mission, KS 66205
913-677-5138
Sutton, Richard L D
3203 W 83rd Terrace
Shawnee Mission, KS 66206
913-383-1894
Swaim, Truett ORS
205 W R.D. Mize Rd. Ste 402
Blue Springs, MO 64015
816-229-6800
Swanson, Howard J RHU
Suite T101 Research Med Off.
6420 Prospect
Kansas City, MO 64132
816-363-4100
Sword, Suzanne H FP
8600 Ward Parkway
Ward Parkway Health Ser
Kansas City, MO 64114
816-363-0600
Szabados, Ernest D ORS
1901 S. Leslie
Independence, MO 64050
Szeto, J. Simon IM
720 Oak St. Suite 200
Kansas City, MO 64106
816-471-2892
Tackett, Russell E U
6700 Troost #300
Kansas City, MO 64131
816-361-0277
Takacs, Robert J ORS
Rockhill Medical Plaza North
Suite 103 6650 Troost
Kansas City, MO 64131
816-444-4664
Talbott, Lawrence B PTH
4104 W. 110th St.
Shawnee Mission, KS 66211
Tamblyn, Claire L AN
7912 Pawnee
Prairie Village, KS 66208
913-642-7737
Taormina, Marc K GE
1515 W. Truman Rd. Suite 403
Independence, MO 64050
Taylor, John R.W. OPH
443 West 68th
Kansas City, MO 64113
816-363-5350
Thalblum, Harvey DR
6400 Prospect Ste 310
Kansas City, MO 64132
816-523-2400
Thedinger, Bradley S OT
3100 Broadway
Suite 509
Kansas City, MO 64111
816-531-7373
Theel, Otto W Jr. FP
4301 Main St
Kansas City, MO 64111
816-931-3199
Thibeault, Donald W PD
Children's Mercy Hosp.
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3592
Thomas, Alexis G NEP
1000 E. 50 #405
Kansas City, MO 64110
816-444-2098
Thomas, Christopher Y GS
5830 Mission Dr.
Shawnee Mission, KS 66208
816-753-7460
Thomas, James J AN
Anesthesia Associates of KC
6400 Prospect #138
Kansas City, MO 64132
816-444-1139
*Thomas-Richards, Jose R ORS
3101 Broadway #370
Kansas City, MO 64111
816-561-7251
Thompson, David E AN
2400 R. D. Mize Road #1
Independence, MO 64057
Thompson, Scott W FP
2900 Baltimore Suite 400
Kansas City, MO 64108
816-756-1222
Throne, Ben J TR
6400 Prospect Suite 240
Kansas City, MO 64132
Tice, Wayne K DR
3626 Blue Jacket Drive
Lee's Summit, MO 64063
816-373-3385
Tillema, David A ORS
Rockhill Medical Plaza North
Suite 103 6650 Troost
Kansas City, MO 64131
816-444-4664

Tiojanco, Milagros E AN
11807 Washington
Kansas City, MO 64114
816-942-8314
Titterington, Frank W IM
236 Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
816-531-2020
Toubes, Daniel B IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-363-7710
Towle, Daniel J AN
6400 Prospect Suite 138
Kansas City, MO 64132
816-444-1139
Trevor, Richard P R
6400 Prospect Suite 310
Kansas City, MO 64132
816-523-2400
Trimble, Geo X IM
3030 Baltimore
Kansas City, MO 64108
Troeh, Melvin R IM
1515 W. Truman Rd.
Suite 301
Independence, MO 64050
816-836-8130
Trowbridge, Barnard C OTO
415 E 63rd St
Kansas City, MO 64110
816-361-0744
Trowbridge, Ellsworth P
18435 101st Dr
Sun City, AZ 85373
602-972-3132
Tuohy, Gerald F AN
44th & Wornall Rd
Kansas City, MO 64111
816-932-2033
Turano, Wm L OBG
6700 Raytown Rd
Raytown, MO 64133
816-358-5300
Tutera, Dominic F OBG
1260 W. 63rd. Terr.
Kansas City, MO 64113
Tutera, Gino OBG
400 E. Red Bridge Rd. #202
Kansas City, MO 64131
816-941-3640
Twyman, Richard A OS
7919 Bristol Ct
Shawnee Mission, KS 66208
913-642-7919
Underwood, Dick H OPH
2009 W. 123 Terrace
Leawood, KS 66209
816-491-6632
*Vale, Janett A IM
Prime Health.
373 W. 101st Terrace
Kansas City, MO 64114
816-362-8829
Van Biber, James T PD
1612 W Truman Rd
Independence, MO 64050
816-252-9922
Van Buskirk, Wm C GS
6700 Troost Suite 308
Kansas City, MO 64131
816-361-1822
Vaughn, James W P
411 Nichols Rd., Ste. 208
Kansas City, MO 64112
816-561-6766
Vaughters, Frank M PD
1000 E. 50th #320
Kansas City, MO 64110
816-523-0066
Vera, Enrique P
6724 Troost
#205
Kansas City, MO 64131
816-361-0899
Verdught, Ammon L IM
1515 West Truman #301
Independence, MO 64050
Vergara, Gerardo G PTH
3030 Baltimore
Kansas City, MO 64108
816-753-4600
*Vialle, Gene M AN
Anesthesia Associates of KC
6400 Prospect Suite 138
Kansas City, MO 64132
816-444-1139
Villanueva, Angela A PTH
St. Joseph Hosp.
1000 Carondelet Dr.
Kansas City, MO 64114
816-942-4400
Viril, Leonardo C GE
6650 Troost Suite 100
Kansas City, MO 64131
816-523-2300
Vogel, Arthur P AN
2215 Drury Lane
Shawnee Mission, KS 66208
913-236-8942

*Vogelsang, Judith K IM
Prime Health Stadium Med.
9150 E. 41st Terrace
Kansas City, MO 64123
816-241-7699
Voshall, David L IM
205 W. RD Mize Rd. Suite 308
Blue Springs, MO 64015
816-228-9841
Voth, Harold W IM
5413 Neosho
Shawnee Mission, KS 66205
Waddell, Thomas H DR
710 Medical Plaza
4320 Wornall Rd
Kansas City, MO 64111
816-531-9481
Wade, Kim C IM
2323 Oakley
Kansas City, MO 64127
816-231-8885
Waeckerle, Joseph F FM
830 W 54th St.
Kansas City, MO 64112
816-444-7747
Wagner, Paul J AN
Greenwillow Farm Rt 1
Greenwood, MO 64034
Waldman, Richard A PD
Rt. 1, Box 91A
Platte City, MO 64079
Waldorf, James C PS
Suite T115 6420 Prospect
Kansas City, MO 64132
Walker, Orville C PD
1515 W Truman Rd
Independence, MO 64050
816-833-0990
Wall, Harry C A
6700 Troost #520
Kansas City, MO 64131
816-363-6155
Wall, Leonard A OBG
4320 Wornall Rd.
Suite 520
Kansas City, MO 64111
816-531-9400
Wallace, Darryl L OBG
Dept. Of Med. Ed. St. Luke
44th And Wornall Rd
Kansas City, MO 64111
816-932-2026
Warady, Bradley A PD
Children's Mercy Hospital
24th & Gillham Rd.
Kansas City, MO 64108
816-234-3010
*Wasserman, Gary S PD
Childrens Mercy Hosp
24th & Gillham Rd
Kansas City, MO 64108
816-234-3000
Waters, Jeffrey A PD
206 Broadway Medical Bl
4400 Broadway
Kansas City, MO 64111
816-561-8100
Wathanacharoen, Suchint TS
Medical Plaza II 50
4320 Wornall Rd.
Kansas City, MO 64111
816-931-7743
Watts, Jane M FP
Goppert Family Care Ctr
6601 Rockhill Road
Kansas City, MO 64131
816-276-7600
Waxman, Dan A PTH
4040 Main
Community Blood Center
Kansas City, MO 64111
816-753-4040
Waxman, Herbert J IM
Suite 201 6650 Troost
Kansas City, MO 64131
816-363-7710
Waxman, Jane Z PD
12516 W. 85th Terr.
Lenexa, KS 66215
Waxman, Michael J PUD
6420 Prospect Suite T303
Kansas City, MO 64132
816-333-1919
Waxman, Steve W U
Univ of KS Med Ctr
39th & Rainbow Blvd.
Kansas City, KS 66103
913-588-5000
Weaver, Michael L IM
4505 Headwood #1
Kansas City, MO 64111
816-931-8881
Weaver, Steven C AN
6601 Rockhill Road
Box 11316
Kansas City, MO 64112
816-276-7901
Webb, Harry E PS
502 Broadway Med Bldg
4400 Broadway
Kansas City, MO 64111
816-753-0303

---

*Doctor of osteopathy.

Weiford, Edward C NS
2009 W. 68th St.
Shawnee Mission, KS 66208
913-362-3237
Weinstein, Chas L N
4440 Broadway
Kansas City, MO 64111
816-561-4655
Weir, Robt K OPH
610 Blue Ridge Tower
4240 Blue Ridge Blvd
Kansas City, MO 64133
816-358-3600
Wells, Donald E NEP
1620 W. Park Terrace
Atlantic Beach, FL 32233
Wells, James A AN
1008 Valentine Rd
Kansas City, MO 64111
816-931-2120
Wells, Stanley D DR
6400 Prospect Suite 310
Kansas City, MO 64132
816-523-2400
Welter, Eugene S OM
8511 Hillcrest Rd. Ste 320
Kansas City, MO 64138
Wenner, Herbert A PD
9711 Johnson Drive
Shawnee Mission, KS 66203
Werth, Claude J P
6420 Prospect Suite T203
Kansas City, MO 64132
816-333-0405
West, Harold D ORS
1515 W. Truman Rd. Suite 401
Independence, MO 64050
816-254-4800
Wheeler, Chas B PH
4320 Wornall Rd
Kansas City, MO 64111
816-931-4141
Whitaker, James H ORS
6420 Prospect
Suite T207
Kansas City, MO 64132
816-444-9000
White, Chas H AN
6518 Overhill Rd
Shawnee Mission, KS 66208
913-362-7721
White, James S U
6700 Troost
208 Rockhill Med. Bldg.
Kansas City, MO 64131
816-444-4780
White, Stoughton F U
6815 Cherokee Lane
Shawnee Mission, KS 66208
816-362-5838
White, Wm E NM
6400 Prospect
Kansas City, MO 64132
816-333-5787
Whitman, Daniel S IM
UMKC School Of Medicine
2411 Holmes
Kansas City, MO 64108
816-276-1980
Whitmore, J. Stewart R
148 Riverboat Dr.
Washington, NC 27889
Whittaker, Chas K NS
4440 Broadway
Kansas City, MO 64111
816-561-4655
Wientzen, Arthur S IM
751 E. 63rd 3rd Floor
Kansas City, MO 64110
816-333-6640
Wilber, Robt D GE
4320 Wornall Rd Ste 208
Kansas City, MO 64111
816-531-0552
Wilcox, Dennis M DR
3904 W. 125th Terrace
Leawood, KS 66209
913-451-0037
Wilhelm, Warren F IM
Rt. 73, Box 250-R.
Lake Ozark, MO 65049
Wilkins, Michael S IM
550 Baltimore Med. Bldg.
2900 Baltimore
Kansas City, MO 64108
816-756-2673
Wilkinson, Chas B P
Gr KC Mental Hlth Found
2055 Holmes
Kansas City, MO 64108
816-471-3000
Wilkinson, Everett A GS
6810 Linden Lane
Prairie Village, KS 66208
Williams, Joseph C OBG
T301 Research Med. Bld.
6420 Prospect
Kansas City, MO 64132
816-444-6888
Williams, Kathleen M PD
373 W. 101st Terr.
Kansas City, MO 64114
816-942-8200
Williams, Paul A FP
Truman Med. Ctr. East
Lee' Summit, MO 64139
816-373-8210
Williams, Roland D OTO
1010 Carondelet Dr.
Suite 224
Kansas City, MO 64114
816-942-7200
Williams, Starks J PD
1734 E. 63rd St.
Suite 205
Kansas City, MO 64110
816-361-6699
Willoughby, James W A
24-26 S. Main St. Suite A
P. O. Box 271
Liberty, MO 64068
816-781-0902
Willoughby, Jean B IM
1019 W. 69th Terr.
Kansas City, MO 64113
816-523-6434
Wilson, Clifford C CRS
1129 Leisure Lane #8
Walnut Creek, CA 94595
Wilt, David A IM
6420 Prospect Suite T101
Kansas City, MO 64132
816-363-4100
Winer, Herbert J OBG
1000 E. 50th St, Suite 300
Kansas City, MO 64110
816-444-0505
Winer, Nathaniel IM
2411 Holmes
Truman Medical Cente
Kansas City, MO 64108
816-276-1902
Winkelman, Esther B GP
6700 the Paseo
Kansas City, MO 64132
816-444-9900
Wise, Geo W PD
4610 Homestead
Shawnee Mission, KS 66208
Wise, Morris F U
6724 Troost Suite #608
Kansas City, MO 64131
816-333-7885
Wolf, Jack W IM
6125 Moringside Dr.
Kansas City, MO 64113
816-333-5817
Wood, Barry C IM
4320 Wornall Rd. Suite 208
Kansas City, MO 64111
816-531-0552
Wood, David G DR
2928 Main, #340
Kansas City, MO 64108
816-756-1050
Woods, Gerald M PD
12008 Jarboe St.
Kansas City, MO 64145
816-234-3297
Woods, Walton C OM
9004 E. 73rd. St
Kansas City, MO 64133
816-353-4714
Woodward, Wm W IM
21 Lakeside Drive
Holiday Island, AR 72632
Wortmann, Robt F OBG
2819 W 66th Terr
Shawnee Mission, KS 66208
913-362-3133
Wright, R P IM
2930 W. 49th St.
Shawnee Mission, KS 66205
Wright, Robert W III AN
Penn View Anes
3030 Baltimore
Kansas City, MO 64108
816-753-4600
Wu, Shuh Min IM
6675 Holmes Suite 440
Kansas City, MO 64131
816-363-5662
Wu, Wm Q NS
2900 Baltimore Suite 390
#316
Kansas City, MO 64108
Wurster, Jerry B OPH
4320 Wornall Rd
#714
Kansas City, MO 64111
816-561-2289
Wurster, Mark W IM
Suite 236 4320 Wornall Rd.
Kansas City, MO 64111
816-531-2020
Wurster, W J OTO
1010 Carondelet Dr.
Suite 224
Kansas City, MO 64114
816-942-7200
Yeast, John D OBG
4400 Wornall Rd.
Outpatient Ctr 2nd Fl.
Kansas City, MO 64111
816-932-3585
Yedlin, Jay H AN
1000 E. 50th St. #340
Kansas City, MO 64110
816-333-7484
Yost, John G JR CPS
6420 Prospect Suite T 207
Kansas City, MO 64132
816-444-9000
Youll, Donald V A
1010 Carondelet Dr.
Suite 220
Kansas City, MO 64114
816-941-9130
Youmans, Ronald A N
415 E 63rd St
Kansas City, MO 64110
816-333-2891
Young, James F P
4320 Wornall Rd Ste 716
Kansas City, MO 64111
816-931-4311
Youngblood, James P OBG
Truman Med Ctr Dept Of Obg
2301 Holmes
Kansas City, MO 64108
816-556-3454
Yu, Mario K N
6700 Troost Ave. Suite 436
Kansas City, MO 64131
816-361-5588
Zarr, James S PM
6650 Troost Suite 306
Kansas City, MO 64131
816-276-7035
Zerr, Charles H IM
1100 West Truman Rd.
Independence, MO 64050
816-254-3555
Ziemianski, Matthew C OPH
8901 W. 74th St. Suite 35
Shawnee Mission, KS 66204
913-432-5885
Zinn, Marcia V AN
Truman Med. Ctr. Dept Surg.
2301 Holmes
Kansas City, MO 64108
816-556-3216
Zoller, David D PTH
Rt. 1, Box 280 B
Blue Springs, MO 64015
816-753-5700
Zukaitis, Mark G AN
Anesthesia Associates of KC
6400 Prospect-Suite 138
Kansas City, MO 64132
816-444-1139
Zwerenz, Bruno H P
7900 Lee's Summit Rd.
Kansas City, MO 64139
816-373-4415

126—METRO MED-RESIDENTS

Dorsett, Sarah J FP
Goppert Family Care Ctr.
6601 Rockhill Rd.
Kansas City, MO 64131
816-276-7600
McCulloch, Scott W IM
5717 Outlook #303
Mission, KS 66202
913-362-9515
Olsen, Timothy W IM
4134 Eaten
Kansas City, KS 66103
913-262-4470

135—MID-MISSOURI

Bartlett, Hugh C GS
P. O. Box 859
Rolla, MO 65401
314-364-6051
Bass, Barry J GS
1501 E. 10th St. Suite A
Rolla, MO 65401
314-364-7799
Bass, James J GP
1201 Hauck Dr.
Rolla, MO 65401
314-364-8818
Baumann, Albert R GP
408 Main St.
Steelville, MO 65565
314-775-2119
Breeden, Richard L N
Suite 130 1100 W. 10th
Rolla, MO 65401
314-364-1218

---

*Doctor of osteopathy.

Butts, James D GP
100 Adrian
Rolla, MO 65401
314-364-4356
Cook, Katherine S PD
11th & Bishop
Rolla, MO 65401
314-364-4870
Deardeuff, Dwight L IM
Rt 2 Box 670
Rolla, MO 65401
314-341-5295
Drake, Avery A OPH
4357 N 106th Ave
Phoenix, AZ 85039
Dumonceaux, Leonard J P
1100 W. 10th St.
Rolla, MO 65401
314-341-8080
Elders, Frank A GP
Rt 1 Box 69A
Cuba, MO 65453
Feind, Earl E GP
P. O. Box B
Rolla, MO 65401
314-364-4226
Felts, James A FP
1100 W. 10th St.
Rolla, MO 65401
314-364-4226
Fortin, Jorge A OBG
1100 W. 10th St.
Rolla, MO 65401
314-364-8100
Huss, Randall D FP
1100 W. 10th St.
Rolla, MO 65401
314-364-4226
Huster, Robert M OBG
1501 E. 10th St. Suite D
Rolla, MO 65401
314-364-0500
Jenkins, Edward R FP
Roubidoux Medical Park
Waynesville, MO 65583
314-774-6423
King, Robert W AN
1100 W. 10th St.
Rolla, MO 65401
314-364-3100
Linde, John W OPH
1100 W. 10th St.
Rolla, MO 65401
314-341-2230
Marti, Larry B ORS
1100 W 10th St
Rolla, MO 65401
314-341-2678
Matthews, Richard H ONC
1000 W. 10th St.
Rolla, MO 65401
314-364-3100
McCullough, Nancy J AN
401 Rolla St. #2
Rolla, MO 65401
314-341-8058
Myers, James M GP
P.O. Drawer D
Rolla, MO 65401
314-341-4284
Paskon, Seth IM
303 N Jackson & 4th. Street
Salem, MO 65560
314-729-6036
Place, Howard M ORS
Dept of Orth Surg GLWACH
Ft Leonard Wood, MO 65473
314-368-9445
Pojanasomboon, Pichat OPH
1100 W 10th St
Rolla, MO 65401
314-364-5600
Ranney, Bonnie M FP
1100 W. 10th St. Suite 120
Rolla, MO 65401
314-364-4226
Russell, Barbara E PD
11th and Bishop
Rolla, MO 65401
314-364-4870
Seifert, Carolyn L P
1100 W. 10th Suite 165
Rolla, MO 65401
314-341-8080
Slahorek, George J PTH
Gen Leonard Wood Army Hosp
Pathology Dept
Ft Leonard Wood, MO 65473
314-368-9661
Smith, Ted P FP
S&S Acres, Route 2
Rolla, MO 65401
314-364-4226
Stoecker, William V D
1100 W 10th St.
Rolla, MO 65401
314-364-0122
Stricker, Eamil A GS
10th & Bishop
Rolla, MO 65401
314-364-3599
Stricker, William E A
10th & Bishop
Rolla, MO 65401
314-341-3555
Vandewalker, Mark L A
Allergy Clinic GLWACH
Ft Leonard Wood, MO 65473
314-368-9391
Wan, Shaw P U
632 South Bishop
Rolla, MO 65401
314-364-1014
White, Eugene F OBG
1100 W 10th St.
Rolla, MO 65401
314-364-8100
Young, Robt B FP
700 W 11th St
Rolla, MO 65401
314-364-4870

138—MINERAL AREA

Auner, J. David FP
128 W. Russell Street
P. O. Box 85
Ironton, MO 63650
314-546-3434
Boatright, Kevin FP
301 W. Liberty
Farmington, MO 63640
314-756-6751
Borrego, Raul A IM
301 W. Liberty
Farmington, MO 63640
314-756-6751
Cancelada, Juan OBG
317 North "A" Street
Farmington, MO 63640
314-756-6751
Carleton, Chas E GP
Med Arts Clinic
Farmington, MO 63640
314-756-6751
Chastain, Chas W FP
Family Health Care
815 E. Main St.
Flat River, MO 63601
314-431-6600
Chung, Kap Eun GS
205 West Main
Fredericktown, MO 63645
314-783-6428
Datta, Narendar K OBG
St. Francois OBG, LTD
Box 210
Bonne Terre, MO 63628
314-937-8668
Davis, Thomas N P
P. O. Box 341
Mountain View, MO 65548
Dent, George W OBG
Medical Arts Clinic
301 West Liberty
Farmington, MO 63640
314-756-6751
Dettmer, Robt F GP
P. O. Box 307
Ironton, MO 63650
314-546-2415
Dierker, Harry D FP
301 W Liberty St
Farmington, MO 63640
314-756-6751
Ellegood, James H GP
43 Marquette
Lake St. Louis, MO 63367
314-625-3281
Farmer, Norma D P
15 Westmount Dr.
Farmington, MO 63640
314-756-7803
Fitz, John R CPH
202-B E. Columbia St.
Farmington, MO 63640
314-756-6408
Griffin, Darrell L D
301 W. Liberty
Medical Arts Clinic
Farmington, MO 63640
314-756-8908
Grix, Gary J IM
Medical Arts Clinic
Farmington, MO 63640
314-756-6751
Hamburg, Eric D IM
301 W. Liberty
Farmington, MO 63640
314-756-6751
Hardy, Stanton L FP
1000 N Main St
Desloge, MO 63601
314-431-3128
Huckstep, Robt A IM
Rt. 6, Box 6506
Farmington, MO 63640
314-756-5340
Karraker, Alvan G GP
301 W Liberty St
Medical Arts Clinic
Farmington, MO 63640
314-756-6751
Kim, Longius H GS
2 Professional Building
200 Henry Bub Dr
Potosi, MO 63664
314-438-6285
Mardini, Edward E GS
P. O. Box 68
Bonne Terre, MO 63628
McKinney, William D Jr. FP
202 W. Russell
Ironton, MO 63650
314-546-7311
Menne, Marvin C GP
109 N. Main St.
Ironton, MO 63650
314-546-7437
Mullen, Jack IM
509 St. Francis Road
Bonne Terre, MO 63628
314-358-3492
Oliver, George A GS
Medical Arts Clinic
Farmington, MO 63640
314-756-6751
Parker, Gary J IM
Rt #4, Box 403
Farmington, MO 63640
314-756-1678
Pichardo, Javier A P
701 Eastbridge Dr.
St. Peters, MO 63376
Sermchief, Chaiyarat OBG
501 Armory St.
Fredericktown, MO 63645
314-783-2342
Simpelo, Rustico V GS
Simpelo Medical Clinic P.C.
200 Henry Bub Dr #4
Potosi, MO 63664
314-438-5408
Tuttle, Jay F P
526 Sara Lane Condo 12
Creve Coeur, MO 63141
Vibulakaopun, Pairat IM
527 Benham St.
Bonne Terre, MO 63628
314-358-5577
Watkins, Geo L GS
P. O. Box 1745
Rancho Santa Fe, CA 92067

146—MONTGOMERY

Byland, Saml J GP
120 Hudson St
Wellsville, MO 63384
314-684-2208

150—NORTHEAST

Ahlum, Sandra J OBG
P.O. Box 311
Hannibal, MO 63401
314-221-5250
Avila, Estrella Z IM
110 Magnolia Ave
Hannibal, MO 63401
314-221-7176
Bach, Lysle M R
4209 W Ely Rd
Hannibal, MO 63401
314-221-5500
Bell, Robt M P
165 Lake Apollo
Hannibal, MO 63401
314-221-2120
Borromeo, Carlos J PD
603 Country Club Dr
Hannibal, MO 63401
314-221-4368
Buben, Robt W GS
2910 St Marys Ave
Hannibal, MO 63401
314-221-0996
Bukstein, Michael J GS
P.O. Box 311
Hannibal, MO 63401
314-221-5250
Burns, Francis R OBG
11 San Reno Dr.
Hannibal, MO 63401
314-221-0611
Burton, Dale F GS
P O Box 311
Hannibal, MO 63401
314-221-5250

---

*Doctor of osteopathy

Clisham, John F U
P. O. Box 127
Hannibal, MO 63401
314-221-2744
Comer, Julian R DR
Rt. 3 Box 147
New London, MO 63459
314-221-5500
Florendo, Federico N PTH
Hannibal Reg Health Care
Hannibal, MO 63401
314-248-0826
Florendo, Purificacion T OBG
Tower Plaza Clinic Rd
Hannibal, MO 63401
314-221-2116
Foreman, Phillip B GS
P O Box 311
Hannibal, MO 63401
314-221-5250
Glickman, Andrew S AN
460 Country Club Drive
Hannibal, MO 63401
314-221-6951
Greene, Harry L CD
2500 Pleasant St.
Hannibal, MO 63401
314-221-0364
Ha, Richard J IM
Rt. 1 Sky View Ranch
Hannibal, MO 63401
314-221-8225
Hall, Stanley G PTH
Sycamore Spring
RFD #2
Hannibal, MO 63401
314-221-5646
Halpin, Stephen E IM
711 Grand Ave.
Hannibal, MO 63401
314-221-5250
Hamlin, Wyeth IM
#5 Briarwood
Hannibal, MO 63401
314-221-0492
*Hevel, Robert W FP
410 Linnwood Dr.
Palmyra, MO 63461
314-769-2231
Jayanandaiah, Hiremathada IM
4 Briarwood
Hannibal, MO 63401
314-221-5250
Johnson, Lent C FP
P.O. Box 311
Hannibal, MO 63401
314-221-5250
Kerkemeyer, George IM
2910 St. Mary's Ave.
Hannibal, MO 63401
314-221-0996
Kruse, Carl R FP
706 S Dickerson St
Palmyra, MO 63461
314-769-2335
Lichty, Chas A GP
Shelbina, MO 63468
314-588-4476
314-588-4476
Mann, James K PD
4074 Hillside Drive
Hannibal, MO 63401
314-221-5250
McHardy, Bryson R Jr. PD
P.O. Box 311
Hannibal, MO 63401
314-221-5250
Memken, John A FP
711 Grand Avenue
Hannibal Clinic, Inc.
Hannibal, MO 63401
314-221-5250
Palmer, Russell H GP
706 S Dickerson St
Palmyra, MO 63461
314-769-2335
Plowman, Edward M OPH
1 Northport
Hannibal, MO 63401
Rapp, Earl L GP
Box 311
Hannibal, MO 63401
314-221-5250
Ritterbusch, James K Jr. ORS
711 Grand #311
Hannibal, MO 63401
314-221-5250
Steele, James C OBG
2802 Marsh Ave
Hannibal, MO 63401
314-221-5352
Walley, Lynn J OBG
P.O. Box 311
Hannibal, MO 63401
314-221-5250

158—NORTHWEST

Ahlschier, Allan D DR
St. Frances Hosp Rad Dept
2016 S. Main St.
Maryville, MO 64466
816-562-2600
Almuttar, Wasif F AN
1802 S. Main
P. O. Box 385
Maryville, MO 64468
816-562-2573
Bare, Edward F GP
102 S 6th
Tarkio, MO 64491
816-736-4193
Bauman, Henry C GP
929 W. Third St.
Maryville, MO 64468
816-582-2742
Carlin, Albert L GP
Park Ave
Stanberry, MO 64489
816-783-2192
Carpenter, Wallace GP
100 Cass St
Rock Port, MO 64482
816-744-5361
Chavala, Sudarsan OPH
Maryville Eye Clinic
Hwy 71 S. Box 617
Maryville, MO 64468
816-562-2566
*Combs, Marvin D GP
606 North College
Albany, MO 64402
816-726-3937
Dean, Walter E FP
114 East South Hills Dr.
Maryville, MO 64468
816-562-2525
Dizney, Desmion M FP
G A Faustiana Place
Maryville, MO 64468
816-562-1348
Dunshee, Robt E FP
P. O. Box 408
Maryville, MO 64468
816-582-4571
Engelken, Michael K FP
502 State
Mound City, MO 64470
816-442-5464
Harr, Patrick B FP
114 E. South Hills Dr.
Maryville, MO 64468
816-562-2525
Havaldar, Kanti L IM
Hwy 71 S, P. O. Box C
Maryville, MO 64468
816-582-2156
Humphrey, James D FP
502 State Street
Mound City, MO 64470
816-442-5464
Hunter, James K Jr. FP
High & Main
Fairfax, MO 64446
816-686-2276
Imes, Elvin D FP
3705 Woodrail on the Green
Columbia, MO 65203
Jefferis, Kenneth R GS
114 E. South Hills Dr.
Maryville, MO 64468
616-562-2525
Niedermeyer, Edward L GP
305 Broad St
Tarkio, MO 64491
816-736-4121
Runez, Manuel W GS
Runez Medical Clinic Inc.
1608 S. Main Box 310
Maryville, MO 64468
816-562-2922
Tenorio, Arturo A GS
P. O. Box Park Avenue
Stanberry, MO 64489
816-783-2845
Tenorio, Genoveva P
Hwy 136-E Physicians Bldg
Albany, MO 64402
816-726-3974
Wempe, Geo R FP
80-161 Palm Circle Dr.
La Quinta, CA 92253
Wurm, Michael J FP
114 E. South Hills Dr.
Maryville, MO 64466
816-562-2525

162—NORTH CENTRAL

English, Milton T ORS
2902 N. Baltimore
Kirksville, MO 63501
816-665-5611
Hoffman, Leanna M IM
Box 90
Kirksville, MO 63501
Phillips, Ronald L FP
1201 S. Baltimore
Kirksville, MO 63501
816-665-2892

166—OZARKS

Anderson, Paul B GP
113 W Hickory
Neosho, MO 64850
417-451-1234
Apostol, Andres G GS
801 Lincoln St
Monett, MO 65708
417-235-6297
Barnes, Larry G IM
113 West Hickory
Neosho, MO 64850
Betz, Richard J IM
Sale Mem Hosp
Neosho, MO 64850
417-451-1234
Betz, Robert F GS
113 West Hickory
Neosho, MO 64850
417-451-1234
Bizek, J L GS
550A Hudson Ave.
Aurora, MO 65605
417-678-5175
Blankenship, Geo W GP
113 W. Hickory
Neosho, MO 64850
417-451-1234
Bowman, Melvin C GP
Drawer 100
Neosho, MO 64850
417-451-1155
Brown, Frederick B GP
Aurora Medical Building
550 Hudson Ave.
Aurora, MO 65605
417-678-5176
Campbell, Daniel C TS
Rt. #1 Box 30
Mount Vernon, MO 65712
417-466-3711
Carter, James R GS
113 W Hickory St
Neosho, MO 64850
417-451-1234
Christianson, Chas S PUD
Route 1
Box 85
Mount Vernon, MO 65712
417-466-3400
Cruz, Sergio G IM
St Vincent Hosp
801 Lincoln
Monett, MO 65708
417-235-7824
Dabbs, Wilbur D GP
Sale Mem Hosp
Neosho, MO 64850
417-451-1234
Esparrago, F R GS
808 Euclid
Monett, MO 65708
417-235-3137
Farley, W. Joe FP
1443 N. Robberson #803
Springfield, MO 65802
417-451-4100
Galinsky, Leon J PUD
6776 E. Via Dorado
Tucson, AZ 85715
Gardner, Jos W GP
8 Walnut Lane
Kimberling City, MO 65686
417-739-4418
Glass, Wm J GP
402 Grand
Monett, MO 65708
417-235-7448
Glover, Kenneth GP
P. O. Box 227
Mount Vernon, MO 65712
417-466-2323
Hamilton, Wm P GP
1321 S. Elliott
Aurora, MO 65605
417-678-5194
Hellweg, Chas E PUD
610 N. Myrtle Street
Pierce City, MO 65723
417-476-2816
Hinojosa, Luis A IM
207 S. Market
Mt. Vernon, MO 65712
417-466-2640
Huntington, Ione PUD
P. O. Box 158
Shell Knob, MO 65747
417-858-6869

---

*Doctor of osteopathy.

Isaac, Anita M PM
P. O. Box 404
Ash Grove, MO 65604

Kenney, Roy E GP
113 W Hickory
Neosho, MO 64850
417-451-1234

Kherdekar, Subhash S PUD
600 N. Main
Mt. Vernon, MO 65712

Kime, Ricky L IM
92 S. Main St.
Cassville, MO 65625
417-847-4797

Lentz, Harold C GP
603 Highland Place
Neosho, MO 64850
417-451-1234

McFarland, Rodney J FP
113 Hickory
Neosho, MO 64850
417-451-1234

McMillan, David L IM
113 West Hickory
Neosho, MO 64850
417-451-1234

Morrison, Thos A GP
203 Washington
Aurora, MO 65605
417-678-3225

Mueller, Mark R FP
113 W. Hickory St.
Neosho, MO 64850

Newman, Mary J GP
P O Drawer H
Cassville, MO 65625

Occeno, Victor G GS
808 Euclid
Monett, MO 65708
417-235-6007

Olive, Geo C A
113 W Hickory St
Neosho, MO 64850
417-451-1234

Pennington, Michael S FP
815 Lincoln Ave.
Monett, MO 65708
417-235-6077

Rooney, William R FP
406 West Nellie
Monett, MO 65708
417-235-6077

Schnurr, Thomas C FP
113 W. Hickory
Neosho, MO 64850
417-451-1224

Stringer, Kenton L FP
550 Hudson
Aurora, MO 65605
417-678-5176

Swetnam, Jeffrey A GS
113 W. Hickory
Sale Hospital
Neosho, MO 64850

Watts, Samuel M FP
Aurora Medical Bldg.
550 Hudson
Aurora, MO 65605
417-678-5176

White, Russell D FP
Aurora Medical Building
550 Hudson Ave.
Aurora, MO 65605
417-678-5176

170—PEMISCOT

Hazel, James C Jr. R
Box 198
Caruthersville, MO 63830
314-333-0707

Lopez, Ruben E GP
P.O. Box 434
Hayti, MO 63851
314-359-1306

McCoy, Warren R GP
1117 Ward Ave
Caruthersville, MO 63830
314-333-2711

Painter, Andrew E GP
204 E. 3rd St.
Portageville, MO 63873
314-379-5467

Painter, Lattie B GP
204 E 3rd St
Portageville, MO 63873
314-379-5467

Shirey, Arnold G GP
701 E. Meadow Lane
Hayti, MO 63851

174—PERRY-STE GENEVIEVE

Allego, Melquiadito M NM
Radiology Dept.
Perry County Mem Hosp
Perryville, MO 63775
314-547-4677

Carron, Oscar A OS
208 N. Waters
Perryville, MO 63775
314-547-4214

DeGenova, Gerard H GP
585 Cedar Lane
Ste Genevieve, MO 63670

*Eckstein, Tim E FP
P. O. Box 7
Ste. Genevieve, MO 63670

Fairchild, James F GP
12 S Jackson
Perryville, MO 63775
314-547-2553

Feltz, Lawrence W GP
106 N. Jackson
Perryville, MO 63775
314-547-4585

Gonzales, Jose H U
Perry Plaza Medical Cen
Perryville, MO 63775
314-547-1231

Hoye, Robert C GS
Pointe Basse Plaza
Ste. Genevieve, MO 63670
314-683-2446

Limpiphiphatn, Dhajphong GS
334 N. Main
Perryville, MO 63775
314-547-6321

Limpiphiphatn, Ester P PD
334 N. Main
Perryville, MO 63775
314-547-6321

Lutkewitte, Jos F FP
Hospital Lane & Center Dr.
Ste Genevieve, MO 63670
314-883-2782

McDermott, Alfred E GP
1104 W. Reddick St.
Perryville, MO 63775
314-547-2241

Pontillas, Job B GS
Perry Plaza Med. Ctr.
Perryville, MO 63775
314-547-8219

Raju, Niranjana IM
990 Park Dr.
Ste. Genevieve, MO 63670
314-883-7474

Utterman, Wm F GS
Lake Forest Estates
Ste Genevieve, MO 63670
314-483-2222

Yang, John S OBG
Pointe Basse Plaza Mall
Ste. Genevieve, MO 63670
314-883-5715

178—PETTIS

Allcorn, Donald K FP
302 Hiway 65 North
Lincoln, MO 65338
816-547-3915

Azan, Abraham N OBG
600 E. 13th St.
Sedalia, MO 65301
816-827-0015

Azan, Kenneth N IM
600 E. 13th
Sedalia, MO 65301
816-827-0015

Boyce, John M PTH
2703 Clark Lane
Columbia, MO 65201
314-581-1760

Brazos, John C U
RR #6
Sedalia, MO 65301
816-826-0606

Campbell, Albert J GP
625 E 13th St
Sedalia, MO 65301
816-826-8989

Clemens, Robert M AN
711 W. Broadway
Sedalia, MO 65301
816-826-8384

Cole, Wm R GS
1712 S. Lafayette
Sedalia, MO 65301
816-827-2524

Daum, Harold F R
Rte 1
Sedalia, MO 65301
816-827-0880

Edmonds, Robt W PD
1718 S Ingram
Sedalia, MO 65301
816-827-0500

Edwards, David R GP
1619 S. Moniteau
Sedalia, MO 65301

Edwards, Ryan K ORS
1718 South Ingram
Sedalia, MO 65301
816-827-0505

Eldenburg, Donald O GP
700 S Limit
Sedalia, MO 65301
816-826-7300

Farkas, James R R
Bothwell Memorial Hospi
Radiology Dept
Sedalia, MO 65301
816-826-8833

Foster, R. Steve U
1704 S. Ingram
Sedalia, MO 65301
816-826-7077

Frank, Gael R ORS
Rt. 7, Box 46
Sedalia, MO 65301
816-826-4552

Hartman, Rodney C DR
644 E. 13th St.
Bothwell Mem. Hosp.
Sedalia, MO 65301
816-826-8833

Hopkins, Thomas S IM
Rt 1 Box 123
Hughesville, MO 65334
816-826-4820

Hopkins, Thos J GP
1506 W. Broadway
Sedalia, MO 65301

Hornbostel, Phillip M GS
1718 S. Ingram St.
Sedalia, MO 65301
816-827-0423

Horochowski, Alejandro GS
1704 South Ingram
Sedalia, MO 65301
816-826-5950

Kiburz, Douglas W ORS
1718 S. Ingram
Sedalia, MO 65301
816-826-5890

Lamy, John E GS
400 DAL-WHI-MO Court
Sedalia, MO 65301
816-826-4872

Lowe, Alvin L GP
RR4 Box 242A
Sedalia, MO 65301
816-826-3265

Proctor, Donald C GP
610 West 3rd Street
Sedalia, MO 65301
816-826-7300

Roehrs, David H R
612 S. Ohio
Sedalia, MO 65301
816-827-5244

Stockwood, Robt C OBG
1718 S Ingram
Sedalia, MO 65301
816-826-1381

Sull, Won-Jong GS
1501 South Grand
Sedalia, MO 65301
816-827-2330

Van Dyke, Elmer H OBG
1718 S Ingram
Sedalia, MO 65301
816-826-1381

Woolery, William G IM
1712 S. Lafayette
Sedalia, MO 65301
816-827-2526

Worley, Charles A GP
102 West Ray St.
Sweet Springs, MO 65351

Wuellner, David H IM
1712 S. Lafayette
Sedalia, MO 65301
816-827-2526

186—PIKE

Glenn, Edward A GS
RR 1
Louisiana, MO 63353
314-754-5555

Martin, Wendell J GP
211 S 3rd St
Louisiana, MO 63353
314-754-5555

Middleton, John W FP
1800 South Carolina St.
Louisiana, MO 63353

Pitney, Phillip W FP
211 S 3rd
Louisiana, MO 63353
314-754-5555

Stuerman, Lawrence G FP
2406 Georgia St.
Louisiana, MO 63353
314-754-5555

---

*Doctor of osteopathy.

189—ST CHARLES-LINCOLN

Altman, Martin P GE
2850 W Clay St
St Charles, MO 63301
314-724-1940
Alul, Mohammad Ali H PD
#2 Westbury Dr.
St Charles, MO 63301
314-723-1711
Anderson, Frank K D
330 First Capitol Dr. #460
St. Charles, MO 63301
Bagwe, Panjit M CD
1301 Boonslick
St Charles, MO 63301
314-724-6700
Baird, Keim L P
2860 W Clay St
St Charles, MO 63301
314-946-5844
Bergmann, Daniel J GS
#6 Jungermann Circle Ste 102
St. Peters, MO 63376
314-441-2122
Binz, Donald E FP
145 Centre Pointe Dr. Ste A
St. Charles, MO 63303
314-928-3300
Brown, Robert J OBG
2730 Highway 94 South
St. Charles, MO 63303
314-441-6441
Cabrera, Tomas V GS
70 Jungermann Circle Ste 202
St. Peters, MO 63376
314-441-6340
Canale, John P P
1 Westbury Sq.
Bldg. C
St. Charles, MO 63301
314-946-8810
Cannon, Richard E PDA
12 Westbury
St. Charles, MO 63301
314-723-7333
Canty, Eugene J IM
1824 Sibley St.
St Charles, MO 63301
314-724-0692
Carpenter, James L U
330 1st Capitol Drive #440
St Charles, MO 63301
314-723-4590
Choi, Sei Young P
1360 S. 5th St. #346
Three Flgs
St. Charles, MO 63301
314-946-3886
Clever, Henry W PD
1301 Boonslick Rd
St Charles, MO 63301
314-723-0511
Clever, Victor G OPH
1005 Fairgrounds
St Charles, MO 63301
314-946-6986
Commerford, John F GP
1301 Boonslick Rd
St Charles, MO 63301
314-724-6700
Connelly, Michael W OPH
1005 Fairgrounds
St. Charles, MO 63301
314-946-6986
Conoyer, J. Michael OTO
70 Jungermann Cir, Suite 401
St. Peters, MO 63376
314-447-3100
Copeland, Jeffrey G PSF
330 First Capitol Drive
Suite 360
St. Charles, MO 63301
314-946-3808
Curry, Michael J IM
2850 W Clay St
St Charles, MO 63301
314-724-1940
Cusworth, Robert GE
1301 Boonslick
St. Charles, MO 63301
314-723-2555
Damron, Edward O GP
309 Griffin St
Elsberry, MO 63343
314-898-5450
Del Pizzo, Ferdinand OBG
1301 Boonslick
St Charles, MO 63301
314-723-4143
Dieterich, Russell B OBG
2730 Highway 94 S. #202
St. Charles, MO 63303
314-447-6441
DiFilippo, Emil A ORS
2633 West Clay St.
St Charles, MO 63301
314-946-7050

Duling, Gerald J PD
St Joseph Hospital
Third St & First Cap
St Charles, MO 63301
314-724-2810
Duncan, David T OBG
70 Jungermann Circle #422
St. Peters, MO 63376
Erie, Michael N GS
2 Westbury
St. Charles, MO 63301
314-946-4469
Fajatin, Romulo J IM
#2 Westbury
St. Charles, MO 63301
314-946-9130
Feldman, Mark P OBG
330 First Capitol #340
St. Charles, MO 63301
314-434-7593
Fleming, Robt J OPH
1005 Fairgrounds
St Charles, MO 63301
314-724-7116
Frank, Bruce S OPH
3889 S. Service Road
St. Charles, MO 63303
314-441-7900
Friesen, Randall G OBG
1301 Boonslick
St. Charles, MO 63301
314-723-4143
Geisman, Richard A GE
#70 Jungermann Circle #200
St. Peters, MO 63376
314-447-9784
Goldkamp, John D PD
2 Westbury
St Charles, MO 63301
314-723-2525
Harding, Clarke T PTH
300 First Capitol
St. Charles, MO 63301
314-724-2810
Hu, Raymond J IM
6 Jungermann Circle
St. Peters, MO 63376
314-447-4500
James, Kathleen M GS
2 Westbury
St. Charles, MO 63301
314-724-6633
*Jones, James E GP
418 S. Church
P.O. Box 10
St. Peters, MO 63376
314-278-6578
Kahn, Joseph A PD
2730 Highway 94 South #200
St. Charles, MO 63303
314-441-5437
Kamada, Tsutomu GS
1001 Hwy K Suite 2
O'Fallon Med. Ctr.
O'Fallon, MO 63366
314-272-5454
Kampfe, Paul W GS
2850 West Clay
St. Charles, MO 63301
314-946-7838
Keefe, David M PD
#2 Westbury Drive
St Charles, MO 63301
314-723-2525
Keesal, Dennis EM
300 First Capitol Dr.
St. Joseph Health Care
St. Charles, MO 63301
314-724-2810
Keller, Robt M GP
712 Parr Dr.
Wentzville, MO 63385
314-327-4120
Keohane, Mark ORS
2633 W. Clay St.
St Charles, MO 63301
314-946-7050
Kingsbury, Robt J GS
6 Jungermann Circle Ste 102
St. Peters, MO 63376
314-441-2122
Kister, Geo E GP
45 Honey Locust Lane #107B
St. Charles, MO 63301
Kulkarni, Satish R P
13516 Weston Place
Town & Country, MO 63131
314-469-7235
Lamb, Eileen IM
2730 Highway 94 S. Suite 102
St. Charles, MO 63303
314-441-6072
Linsenmeyer, Charles M ORS
2633 W. Clay St.
St Charles, MO 63301
314-946-7050
Marrs, David B D
330 First Capitol Dr. #460
St. Charles, MO 63301
314-946-7608

McCabe, Eugene J OPH
1005 Fairgrounds
St. Charles, MO 63301
314-946-6986
McCollister, David L GS
200 Medical Plaza
Lake St. Louis, MO 63367
314-625-2662
Meltz, Gary J IM
2730 Highway 94 South #101
St. Charles, MO 63303
314-447-7038
Menendez, Silvana Y P
1360 E. Fifth St.
St. Charles, MO 63301
314-946-6991
Mentel, John J IM
6 Jungermann Circle
Suite 108
St. Peters, MO 63376
314-441-7955
Meyers, Jerry R GS
6 Jungermann Circle #102
St. Peters, MO 63376
314-724-0101
Minkoff, I. Monica HEM
#6 Jungermann Circle
St Peters, MO 63376
314-441-9393
Moeller, F. Delbert OBG
200 Medical Plaza Suite 101
Lake St. Louis, MO 63367
314-878-6977
Mohapatra, Raj N U
70 Jungerman Circle Ste 202
St. Peters, MO 63376
314-447-6949
Muhm, Harvard Y GS
1301 Boonslick
St Charles, MO 63301
314-723-1144
Muzaffaruddin, Mohammed AN
12831 Wood Valley Ct.
St. Louis, MO 63131
Olson, Richard O GS
2850 W Clay St
St Charles, MO 63301
314-724-1940
Padilla, Pedro C U
#15 Manor Rd.
Troy, MO 63379
314-528-6844
Perkoske, Michaele M IM
24 Lake Forest Drive
St. Charles, MO 63301
314-946-1674
Perlmutter, John C OPH
2860 W. Clay St.
St. Charles, MO 63301
314-724-6880
Perna, Vincent P PTH
11636 Administration Dr.
Creve Coeur, MO 63146
314-567-3905
Piper, Terrence L ORS
#6 Jungermann Cir.
St. Peters, MO 63376
314-447-3444
Poggemeier, Wm H FP
120 First Capitol Dr.
St Charles, MO 63301
314-724-6336
Qalbani, Mahmood A AN
4105 Providence Dr.
St. Charles, MO 63301
314-441-6487
Richaroson, Tyrun K U
116 First Capitol Drive
St. Charles, MO 63301
314-946-6959
Roter, Alexander M OBG
2 Westbury Dr
St Charles, MO 63301
314-946-5002
Rother, Paul H IM
1301 Boonslick Rd
St Charles, MO 63301
314-724-6700
Roxas, Generoso P IM
533 Jefferson Street
St. Charles, MO 63301
314-723-5116
Sanchez, Guadalupe D
70 Jungermann Circle Ste 204
St. Peters, MO 63376
314-447-5197
Schaberg, James F ORS
2633 West Clay
St. Charles, MO 63301
314-946-7050
Schlansky, Howard J PD
2730 Highway 94 South #200
St. Charles, MO 63303
314-441-5437
Schnarr, William IM
330 First Capitol Dr. #470
St. Charles, MO 63301
Schneider, Thos A GS
2850 W Clay
St Charles, MO 63301
314-724-1940

---

*Doctor of osteopathy.

Schuetz, Alfred IM
1301 Boonslick
St Charles, MO 63301
314-724-6700
Schuetz, Evelyne G OBG
1301 Boonslick
St. Charles, MO 63301
314-723-4143
Siler, Thomas M PUD
330 First Capitol Dr. #470
St. Charles, MO 63301
314-946-1650
*Sill, William FP
#6 Jungermann Circle
Suite 101
St Peters, MO 63376
314-447-6050
Simowitz, Fredric M N
20 Vouga Lane
St. Louis, MO 63131
314-872-9070
Smoller, Martin B IM
7624 Westmoreland
St Louis, MO 63105
314-724-1940
Soucy, John C IM
2850 W Clay St
St Charles, MO 63301
314-724-1940
Steiman, Barry OBG
11636 Chieftain
Creve Coeur, MO 63141
314-724-1940
Stufflebam, Brian W IM
6 Jungermann Circle
Suite 201
St. Peters, MO 63376
314-724-1940
Suarez-Solar, Pedro L P
1360 S 5th St Suite 270
St Charles, MO 63301
314-946-6991
Thiele, Otto K GS
2 Westbury
St Charles, MO 63301
314-724-0633
Uhlemann, John H D
1301 Boonslick
St Charles, MO 63301
314-724-6700
Umar, Ibrahim S PD
4200 N. Cloverleaf
Suite A
St. Charles, MO 63301
314-922-9182
Vighi, James P OTO
2850 W Clay
St Charles, MO 63301
314-724-1940
Vivian, Gary D OBG
#70 Jungermann Circle
Suite 201
St. Peters, MO 63376
314-441-6002
Walsh, Martin J IM
15 Warwick Ct.
St. Charles, MO 63301
314-724-1940
Westerfeld, Roy A PD
1301 Boonslick
St Charles, MO 63301
314-723-0511
Willman, Martin L OTO
2860 W Clay
St Charles, MO 63301
314-946-0821
Wipfler, Earl J GS
405 Duckett Place
St. Charles, MO 63301
314-724-0101

190—ST. LOUIS METROP.

Abada, Eleanor S PTH
12527 Ridgemoor Lake Ct.
St. Louis, MO 63131
314-645-1960
Abada, Roland AN
12527 Ridgemoor Lake Ct.
St. Louis, MO 63131
314-842-5600
Abbott, David A IM
1920 Crampton Ct.
Chesterfield, MO 63017
314-291-6323
Abel, Charles C IM
4949 Barnes Hosp
Suite 16416
St. Louis, MO 63110
314-367-4800
Abel, Oliver IM
4949 Barnes Hosp
Suite 16416
St Louis, MO 63110
314-367-4800
Abelardo, Miguel I IM
300 S Grand
St Louis, MO 63103
314-658-5652
Abinoja, Conrado B IM
4909 Lindenwood
St Louis, MO 63109
314-351-6134
Abodeely, Daniel A P
10010 Kennerly Road
St. Louis, MO 63128
314-842-3560
Abrams, Morris U
1311 Gilbert
St. Louis, MO 63119
Abu Dalu, Ziad FP
100 N. Euclid #706
St. Louis, MO 63108
314-367-3711
Accardo, Pasquale J PD
7275 Emerald Forest Dr.
St. Louis, MO 63129
314-577-5609
Aceto, Thomas PD
1465 S. Grand Blvd.
St. Louis, MO 63104
314-577-5648
Ackerman, Lauren PTH
#8 Chickadee Way
East Setauket, NY 11733
516-444-3011
Adams, Allen G ORS
222 Plant Ave.
Webster Groves, MO 63119
314-878-3500
Adelmann, Eugene N
10004 Kennerly #2250
St Louis, MO 63128
314-849-5144
Adler, Benard C OTO
100 Aberdeen
St. Louis, MO 63105
Aff-Drum, Helen PD
1412 Spoede Rd
St Louis, MO 63131
Afuwape, Emanuel A GS
2102 State St.
Box 2677
E. St Louis, IL 62205
314-274-4640
Aguinaldo, Jaime A IM
9313 Manchester Pd
St Louis, MO 63119
314-961-5656
Ahadi, Abd U IM
13029 Ambois Dr.
St Louis, MO 63141
314-658-1128
Ahern, Archibald M IM
3915 Watson Rd
St Louis, MO 63109
314-644-7100
Ahlering, George P OBG
621 S. New Ballas
St. Louis, MO 63141
314-432-3489
Ahlering, George H OBG
621 S. New Ballas #7003
St. Louis, MO 63141
314-432-3489
Ahmad, Aqeeb FP
6917 W. Florissant
St. Louis, MO 63136
314-383-1100
Ahmad, Bashir AN
18306 Ridge Crest Acres Dr.
Pacific, MO 63069
Ahmad, Naseer IM
6125 Clayton Ave. #220
St. Louis, MO 63139
314-644-2333
Ahmad, Nusrat J OBG
1141 Templeton Place
Ballwin, MO 63011
314-878-5137
Aitken, Louis F IM
12 St. Andrews Dr.
St. Louis, MO 63124
Akbarnia, Behrooz A ORS
1465 S. Grand Blvd. #528
St. Louis, MO 63104
314-771-7643
Aker, Umit T IM
226 Chamonix
St. Louis, MO 63141
314-647-2290
Al-Aly, Robert M R
9 Doubletree
St. Louis, MO 63131
314-821-0644
Albanna, Faisal J NS
9815 Mackenzie Rd.
St. Louis, MO 63123
314-544-3433
Albera, Victor H AN
Gerald Family Clinic
Rt. 2, Box 236
St. Clair, MO 63077
314-629-4944
Albert, I. Renee D
2428 Woodson Rd.
St. Louis, MO 63117
314-427-2424
Albus, Thomas E OPS
12255 DePaul Drive #360
Bridgeton, MO 63044
314-291-7510
Alegre, Jorge M IM
222 S. Woods Mill #310
Chesterfield, MO 63017
314-576-6700
Aleksander, Bernardo G P
1420 Grattan St.
St Louis, MO 63104
314-241-7600
Alex, Morris IM
522 N New Ballas Rd #149
St Louis, MO 63141
314-567-1902
Alexander, George K GS
3009 N. New Ballas Rd. #207
St Louis, MO 63131
314-432-8882
Ali, Syed S CHN
2120 Madison Ave. Suite 206
Granite City, IL 62040
618-876-6321
Allen, Brent T GS
One Barnes Hosp Plaza #5103
St. Louis, MO 63110
314-362-7408
Allen, James H PTH
795 Office Parkway
St. Louis, MO 63141
314-432-1850
Allen, Melvin A OBG
14 Lindworth Dr.
St Louis, MO 63124
Allen, Willard M OBG
14180 Burntwoods Rd.
Glenwood, MD 21738
301-442-2425
Almiron, Osias A GS
4638 Gravois P.O. Box 189
House Springs, MO 63051
314-821-8099
Alonso, J. Mario Jr. FP
2900 Lemay Ferry Rd.
St Louis, MO 63125
314-843-7956
Alonso-Yague, Pascual IM
4585 Washington
Florissant, MO 63033
314-839-3200
Altepeter, H. Martin GS
621 S. New Ballas Rd. #437
St. Louis, MO 63141
314-872-8386
Alvarez, Ulises C IM
4585 Washington
Suite A1
Florissant, MO 63033
314-839-3200
Amanat, Ebrahim P
222 S. Woods Mill #490N
Chesterfield, MO 63017
314-383-0220
Amato, Maryellen DR
4903 Southridge Park Dr.
St. Louis, MO 63129
314-878-6343
Amin, Nalini PD
335 Mid Rivers Dr.
St. Peters, MO 63376
314-278-5003
Amin, Navin J OPH
5505 Delmar Blvd.
St Louis, MO 63112
314-367-7077
Amjad, Mohammad T PD
10004 Kennerly Rd.
St. Louis, MO 63128
314-849-6030
Andersen, David A OPS
1034 South Brentwood #650
St. Louis, MO 63117
314-721-7325
Anderson, Charles B GS
6343 Alexander Dr
St. Louis, MO 63105
314-362-7406
Anderson, Dixie J R
510 South Kingshighway
St. Louis, MO 63110
314-362-2927
Andrus, Charles H GS
7600 Devonshire Ave.
St. Louis, MO 63119
314-781-6354
Anglo, Luis B FP
10004 Kennerly Rd
Suite 155
St Louis, MO 63128
314-849-1200
Anslinger, David L IM
14329 Lake Tahoe Dr
Chesterfield, MO 63017
314-821-9150

---

*Doctor of osteopathy.

Anstey, Geo C OBG
10449 St Charles Rock
St. Ann, MO 63074
314-429-1900
Anstey, John T OBG
10449 St. Charles Rock Rd.1
St. Ann, MO 63074
314-429-1900
Anthony, Lyndon U NS
3635 Vista Ave at Grand
P.O. Box 15250
St. Louis, MO 63110
314-577-8846
Applewhite, Thomas A DR
12416 Kirk Place
St. Louis, MO 63131
314-569-6031
Apprill, Phillip G IM
3 Roclare
St. Louis, MO 63131
314-645-6450
Archer, Carol R R
1325 S Grand
St Louis, MO 63104
314-771-7600
Arenos, Proceso T GS
3009 N Ballas Rd. #216
St. Louis, MO 63131
314-567-5377
Arias, Fernando OBG
621 S. New Ballas Rd.
St Louis, MO 63141
314-569-6880
Arneson, Axel N OBG
6536 Devonshire
St Louis, MO 63109
Arney, Wm G P
329 S. Spoede Road
St. Louis, MO 63141
Arnold, Kenneth J GS
222 S. Woods Mill Rd. #300N
Chesterfield, MO 63017
314-362-7272
Arnot, John P ORS
1034 S Brentwood Blvd #650
St Louis, MO 63117
314-721-7325
Aronberg, Jerome M D
141 N Meramec #315
St Louis, MO 63105
314-863-6221
Arribas, Neva P OPH
4949 Barnes Hosp Plaza 17413
St Louis, MO 63110
314-367-1181
Asaro, Phillip V FP
2202 S. 12th St.
St. Louis, MO 63104
314-771-3883
Ashby, Richard NS
533 Couch Ave. #181
St. Louis, MO 63122
314-965-8282
Aubuchon, Craig E ORS
621 S. New Ballas #101
St. Louis, MO 63141
314-567-0600
Auclair, Ronald J RHU
456 N. New Ballas Rd. #126
St. Louis, MO 63141
314-569-3305
Auer, Arthur I GS
621 S. New Ballas #307
St Louis, MO 63141
314-567-6666
Aufderheide, G. Russell IM
216 Northland Office Bldg.
St Louis, MO 63136
314-383-6818
Augustin, Cesar R
P. O. Box 5386
Nagel Station
St Louis, MO 63115
314-385-3600
Avins, Laurence R OPH
1034 S. Brentwood #816
St. Louis, MO 63117
314-727-6711
Avioli, Louis V IM
216 S Kingshighway
St Louis, MO 63110
314-454-7765
Ayata, Sedat M AN
41 Ladue Estates Dr.
St Louis, MO 63141
314-768-8000
Aykent, Yavuz CD
6400 Clayton Rd. Suite 212
St. Louis, MO 63117
314-645-6450
Aylward, Howard J Jr. IM
911 S Brentwood Blvd
St Louis, MO 63105
314-725-2100
Aylward, Howard J Sr. PS
4517 Carriage Hill Drive
Santa Barbara, CA 93110
Ayvazian, Vatche H GS
621 S New Ballas Rd #1017
St. Louis, MO 63141
314-569-6442
Azzam, Farid J AN
1465 S. Grand Blvd.
St. Louis, MO 63104
314-865-4000
Babka, Joseph J GS
10004 Kennerly Rd. #245
St. Louis, MO 63128
314-849-2500
Backer, Matt H Jr. OBG
1325 S. Grand
St. Louis, MO 63104
314-965-6033
Backer, Robert J NS
13810 Cypress Hollow
Santonio, TX 78232
Baer, Jill M PD
4570 Audubon
St. Louis, MO 63110
Bagby, James W D
#7 Country Life Acres
St Louis, MO 63131
Baglan, Robert J TR
615 S. New Ballas Rd.
St. Louis, MO 63141
454-338-0000
Bagwe, Lata R OBG
Suite #105
14377 Woodlake Dr.
Chesterfield, MO 63017
314-878-6236
Bailey, Drennan GS
6356 Clayton Rd
St Louis, MO 63117
314-647-3834
Bailey, Gregory J NS
2015 Sandfield
St. Louis, MO 63146
314-434-8748
Bailey, Marsha L OM
1369 Libra Drive
Arnold, MO 63010
314-467-1912
Bailey, Wm H OPH
9157 E. Milton Ave.
St Louis, MO 63114
314-423-2870
Baker, Carl N FP
11521 Gravois
St. Louis, MO 63126
314-843-1111
Baldwin, Richard Jr. ORS
1 Ladue Lane
St. Louis, MO 63124
Bale, Robert D OBG
621 S. New Ballas Suite 4005
St. Louis, MO 63141
314-567-5016
Balfe, Dennis M DR
510 S. Kingshighway
St. Louis, MO 63110
314-362-2928
Ballal, Hebri S IM
3915 Watson Rd
St Louis, MO 63109
314-644-7100
Balster, Vernon H OM
819 Locust
St Louis, MO 63101
314-621-4300
Bamshad, Jerry D
1120 Graham Rd
Florissant, MO 63031
314-831-2464
Bandle, Donald F P
3801 January Ave
St Louis, MO 63109
314-644-1474
Banerji, Debabrata GS
3606 Gravois Ave.
St. Louis, MO 63116
314-772-7380
Banez, Colita L P
5400 Arsenal
St Louis, MO 63139
314-892-5774
Banton, M. Roman IM
13634 Peacockfarm Rd
St Louis, MO 63131
314-381-1204
Banton, Michael R F
4256 Maryland Ave Apt 1-West
St. Louis, MO 63108
314-531-9571
Banton, Thomas J ORS
12255 DePaul Dr
Bridgeton, MO 63044
314-739-7654
Banton, William C II IM
13634 Peacockfarm Rd.
St Louis, MO 63131
314-381-1204
Bardsley, John L R
621 S New Ballas Rd
St Louis, MO 63141
314-567-4442
Bari, Wagih A PTH
615 S. New Ballas Rd.
St. Louis, MO 63141
314-569-6120
Barker, Edward T PD
2821 N Ballas Rd #210
St Louis, MO 63131
314-432-1854
Barlow, Val John IM
14443 Bantry Lane Suite 22
Chesterfield, MO 63017
314-527-5425
Barner, Hendrick B CDS
1325 S. Grand Blvd.
St Louis, MO 63104
314-771-7600
Barragan, Hector D GS
533 Couch #G67
St. Louis, MO 63122
314-821-8997
Barrett, Scott R Sr. OBG
10475 Fair Oaks
Columbia, MD 21044
314-367-6930
Barrow, Jack IM
1034 S. Brentwood #1060
St Louis, MO 63117
314-721-0666
Bart, Gerald N PSF
10004 Kennerly #310
St. Louis, MO 63128
314-842-5080
Bartell, Michael F IM
1035 Bellevue #203
St. Louis, MO 63117
314-781-8405
Bartnick, Mitchel L FP
4330 Apple Grove Lane
St. Louis, MO 63128
Barton, Premsri T R
950 Francis Place Suite 11
St. Louis, MO 63105
314-863-1888
Barton, Robert W IM
224 S. Woods Mill Rd.
Chesterfield, MO 63017
314-878-6260
Bashiti, Mohammad F AN
232 S. Woods Mill Rd.
Chesterfield, MO 63017
314-434-1500
Bassman, Donald P ORS
7 Exmoor Dr.
St. Louis, MO 63124
314-569-0130
Batan-Co, Ruby L AN
14233 Reelfoot Lake Dr
Chesterfield, MO 63017
314-469-1039
Baue, Arthur F GS
3556 Caroline St. #C207
St. Louis, MO 63104
314-647-4841
Bauer, Daniel J IM
621 S. New Ballas Rd. #507
St. Louis, MO 63141
314-432-4415
Bauer, Eugene A D
4989 Barnes Hospital Plaza
St Louis, MO 63110
314-362-2643
Bauer, John D PTH
2820 Clearview
St. Louis, MO 63121
314-441-6500
Bauer, Jos A PD
1031 Cyann
Manchester, MO 63011
Baula, Armindo G R
609 Jeffersonian Dr
St Louis, MO 63125
Bauschard, Frederick D D
6500 Chippewa #320
St Louis, MO 63109
314-832-6803
Bauwens, Daniel B IM
222 S. Woods Mill Rd. #510
Chesterfield, MO 63017
314-361-8833
Beal, Catherine E DR
5701 Columbia Avenue
St. Louis, MO 63139
314-645-5065
Beare, Lucia V AN
12 Coach-N-Four
St. Louis, MO 63131
314-966-4648
Beasley, Louis K GE
4555 Manatee Terrace
Stuart, FL 33494
305-283-8255
Beato, David L IM
6305 Devonshire Ave.
St Louis, MO 63109
314-781-2929
Beaty, Wm R OBG
901 Clayton Rd.
Ballwin, MO 63011
314-227-8500

---

*Doctor of osteopathy.

Becker, Bernard OPH
660 S. Euclid
St. Louis, MO 63110
314-362-3740

Becker, Robt L OBG
777 So. New Ballas Rd. #100E
St Louis, MO 63044
314-567-7303

Becker, Stanley C OPH
7220 Watson Road
St Louis, MO 63119
314-352-5500

Beckette, Edmund OBG
65 Crestwood Drive
St. Louis, MO 63105

Bedwell, Eleanor M PD
7333 Hardscrapple #A
St. Louis, MO 63123
314-344-6000

Behbahani, Parviz M AN
12303 DePaul #1-335
Bridgeton, MO 63044
314-344-6335

Behrens, Donald T GS
3535 S. Jefferson Suite 307
St Louis, MO 63118
314-776-0568

Behrens, Gerald L GS
325 N. Kirkwood Rd #301
St. Louis, MO 63122
314-966-8500

Beidle, Raymond J PD
12255 DePaul
Bridgeton, MO 63044

Belew, Joe E OBG
224 S Woods Mill Road
Suite 750
Chesterfield, MO 63017
314-576-9797

Bell, Stephen AN
11133 Dunn Road
St. Louis, MO 63136

Benage, Clarence M GS
11115 N Halls Ferry Rd #303
Florissant, MO 63033
314-839-0366

Benedict, William W IM
522 N New Ballas Rd #349
St. Louis, MO 63141
314-567-3113

Bennett, John OBG
950 Francis Place
Suite 219
St. Louis, MO 63105
314-727-3087

Bennett, Kenneth J GS
456 N New Ballas Rd
St Louis, MO 63141
314-569-0130

Benoist, Walter F PD
119 Church St
St Louis, MO 63135
314-521-1600

Berdy, Gregg J OPH
282 Main St.
Winchester, MA 01890

Berdy, Susan S IM
282 Main Street
Winchester, MA 01890

Berg, Edward F OPH
5 Cedar Crest
St Louis, MO 63132
314-569-1558

Berg, Leonard N
4949 Barnes Hosp Plaza
Suite 16304
St Louis, MO 63110
314-367-3122

Berg, Ralph FP
8064 Watkins Dr.
St. Louis, MO 63105
314-773-7857

Bergmann, Martin TS
4910 Forest Park #206
St Louis, MO 63108
314-361-3676

Bergner, Grace E IM
1311 Gilbert
St. Louis, MO 63119

Berkowitz, Wallace P OTO
6651 Chippewa Ste 221
St. Louis, MO 63109
314-647-8895

Berland, David I P
1221 S. Grand
St. Louis, MO 63104
314-577-8724

Berland, Harry I R
29 Granadaway
St. Louis, MO 63124
314-721-0242

Berman, Wm OBG
4910 Forest Park Blvd #318
St Louis, MO 63108
314-361-5220

Bernabe, Florinio H OBG
1642 Frontenac Woods Lane
St Louis, MO 63131
314-544-3700

Bernabe, Ofelia M IM
2250 Union Rd.
St. Louis, MO 63125
314-544-3700

Bernardo, Kerry L NS
660 S. Euclid Ave. Box 8057
St. Louis, MO 63110
314-362-3457

Berndsen, Gerard H FP
12933 Topping Estates South
St. Louis, MO 63131

Berni, Anthony A R
777 S New Ballas #121E
St Louis, MO 63141
314-567-4350

Bernstein, Aaron M IM
7171 Delmar #100
St Louis, MO 63130
314-863-0033

Berwald, David M GS
3478 Bridgeland Suite #2
Bridgeton, MO 63044
314-739-8200

Berwald, Irvin I FP
747 Old Bonhomme Rd.
St Louis, MO 63132
314-731-2080

Bessey, Palmer Q GS
Box 8109 4960 Audubon Ave.
St. Louis, MO 63110
314-362-5297

Best, John A IM
224 South Woods Mill Rd.
Chesterfield, MO 63017
314-576-6700

Bettonville, Paul J IM
135 W. Adams Ave. #207
St Louis, MO 63122
314-965-7201

Bettonville, Peter V IM
12138 Bent Brook Rd.
St. Louis, MO 63122
314-965-8031

Bhattacharya, Arjun GS
7200 Manchester Rd
St Louis, MO 63143
314-645-7744

Bialecki, Leon IM
11133 Dunn Rd. #216
St Louis, MO 63124
314-355-2300

Biddy, Ralph L P
965 Masonridge Rd
St Louis, MO 63141
314-567-5185

Biel, Stanley I CD
12255 DePaul Dr. Suite 865
Bridgeton, MO 63044
314-291-7730

Biggs, F. Douglas IM
950 Francis Pl. #250
St. Louis, MO 63105
314-863-0009

Biggs, John P
1034 So Brentwood
Suite 800
St Louis, MO 63117
314-863-2244

Bilchik, Ronald C OPH
222 S. Woods Mill Rd. #660
Chesterfield, MO 63017
314-878-9902

Billy, Lawrence J GS
11115 New Halls Ferry #303
Florissant, MO 63033
314-639-0366

Bindbeutel, Donald A GS
1035 Bellevue Ave. #300
St Louis, MO 63117
314-647-0825

Binnington, H B GS
621 S New Ballas Rd #307
St Louis, MO 63141
314-567-6666

Bircher, John L R
508 Susan Road
St. Louis, MO 63129
314-846-0055

Bird, H. Waldo Jr. P
62 Conway Lane
St Louis, MO 63124
314-997-2783

Birenbaum, Aaron IM
10511 Old Olive St Rd
St Louis, MO 63141
314-993-2660

Birge, Clifford A IM
222 S. Woods Mill Rd.
Chesterfield, MO 63017
314-275-8600

Bishop, Marion D GS
1132 Birchgate Tr.
St. Louis, MO 63135
314-837-0505

Black, Joseph T N
4989 Barnes Hospital Plaza
Suite 16304
St Louis, MO 63110
314-367-3122

Blackwell, Charles R AN
47 Pricewoods Lane
St. Louis, MO 63132
314-567-5884

Blair, John Douglas PTH
1402 S. Grand
St Louis, MO 63104
314-664-9800

Blair, Olga M PTH
5 Huntleigh Manor
St Louis, MO 63131
314-664-9800

Blair, Vilray P III ORS
4949 Barnes Hospital Plaza
St. Louis, MO 63110
314-362-6548

Blanke, Thomas J GS
621 S New Ballas Rd #362
St. Louis, MO 63141
314-569-0227

Blaskiewicz, Robert J OBG
2821 N. Ballas Rd. #165
St. Louis, MO 63131

Blath, Richard A U
224 S. Woods Mill Rd.
Suite 510
Chesterfield, MO 63017
314-434-3433

Bliss, Greg A GS
653 S. New Ballas Rd. Apt 2D
St. Louis, MO 63141
314-454-7770

Block, Arnold S P
4501 Lindell Blvd.
St Louis, MO 63108
314-361-8381

Bloomberg, Gordon R PD
777 S. New Ballas Rd. #106E
St. Louis, MO 63141

Bluestone, Kenneth I AN
9037 W. Swan Circle
St. Louis, MO 63144
314-962-7883

Blumenthal, Mark F GS
12025 Tindall
St. Louis, MO 63131
314-739-6060

Blythe, James G OBG
621 S New Ballas Rd #2009
St Louis, MO 63141
314-569-6880

Bobrow, James C OPH
211 North Meramec
St Louis, MO 63105
314-721-0854

Bock, Linda P PD
1817 Aston Way
Chesterfield, MO 63017
314-432-7343

Boedeker, James P OBG
1035 Bellevue Ave Ste S-314
St. Louis, MO 63117
314-647-8300

Bohigian, G M OPH
450 N. New Ballas Rd. #201
St. Louis, MO 63141

Boldizar, Albert G OPH
1048 S McKnight Rd.
St Louis, MO 63117

Boldt, Thos H IM
3394 McKelvey Rd. #107
Bridgeton, MO 63044
314-739-5070

Boles, C R PD
35 N Central Ave
St. Louis, MO 63105
314-725-9100

Bolinske, Robt E A
11722 Studt Ave
St Louis, MO 63141
314-569-0510

Bollozos, George D PTH
3933 S Broadway
St Louis, MO 63118
314-865-3333

Bolman, R. Morton III CDS
4989 Barnes Hosp Plaza #3108
St. Louis, MO 63110
314-362-6190

Bonacorsi, John OTO
12255 DePaul Dr. #765
Bridgeton, MO 63044
314-291-5307

Bondurant, Bryce H OBG
442 E. Viacortes
Green Valley, AZ 85614

Bonfanti, Albert L OBG
109 Northland Office Bldg.
St Louis, MO 63136
314-381-5557

Bonfili, Hubert F AM
143 Pebble Acres
St. Louis, MO 63141
314-694-8896

Boniuk, Isaac OPH
One Barnes Hospital Plaza
#17413
St. Louis, MO 63110
314-367-1181

---

*Doctor of osteopathy.

Bonsanti, Robt L IM
3394 McKelvey Rd.
Bridgeton, MO 63044
314-291-3410
Boonshaft, Benje IM
10511 Old Olive St Rd
St Louis, MO 63141
314-993-2660
Borodach, Gerold N AN
6941 Washington Ave.
St. Louis, MO 63130
772-145-0000
Borowsky, Benj A IM
4910 Forest Park #312
St Louis, MO 63108
314-367-2757
Bortnick, Arthur R OBG
520 Midvale
St Louis, MO 63130
Borts, Michael P IM
The Doctors Borts & Gorman
1402 S. Grand
St. Louis, MO 63104
314-577-8456
Bouhasin, John D PD
3720 Hampton #102
St Louis, MO 63109
314-351-8484
Bourjolly, Wilson P OPH
900 N Highway 67
Florissant, MO 63031
314-838-0300
Boveri, Jos C OBG
1862 Point Oak
St Louis, MO 63131
314-821-2004
Bowdern, Edward H GS
4440 Lindell
Apt. 1102
St Louis, MO 63108
Bowe, Christopher C IM
9701 Landmark Parkway Dr.
Suite 210
St. Louis, MO 63127
314-225-6062
Bowen, Stephen F Jr. OPH
16 Hampton Village Plz
St Louis, MO 63109
314-351-5330
Bowen, William G IM
4652 Maryland Ave.
St. Louis, MO 63108
314-367-3113
Bower, Richard GS
400 S. Kingshighway Ste 5W12
St Louis, MO 63110
314-454-6000
Bowerman, Harold H OTO
705 S. Laclede Station #253
St. Louis, MO 63119
Bowers, James E PD
533 Couch Avenue
St. Louis, MO 63122
314-966-3324
Bowersox, Warren A GS
P. O. Box 36
Pacific, MO 63069
314-257-3500
Bowles, G R IM
12166 Old Big Bend
St Louis, MO 63122
314-821-9150
Bowles, Wm T U
4989 Barnes Hosp Plaza 17301
St Louis, MO 63110
314-361-2052
Boyarsky, Saul U
4960 Audubon Ave Box 8109
St Louis, MO 63110
314-362-7340
Brabbee, Gregory W GS
621 S. New Ballas Rd.
St. Louis, MO 63141
314-567-9930
Bradley, Richard V GS
5 Ladue Ridge Rd.
St Louis, MO 63124
314-362-7251
Brady, Harry R OPH
2821 N. Ballas Rd. #240
St Louis, MO 63131
314-432-6137
Brady, Timothy T IM
1400 Lemay Ferry Rd. #101
St. Louis, MO 63125
Brancato, Donald H ORS
11155 Dunn Rd. #102N
St Louis, MO 63136
314-355-7717
Brandwin, Leslie M IM
4910 Forest Park Blvd.#312
St. Louis, MO 63108
314-367-2757
Brangle, Robt W PTH
6150 Oakland Ave.
St Louis, MO 63139
314-432-1850
Brazil, Maria J GS
1805 North Highway 00
Pacific, MO 63069
314-772-2862
Bremer, Rita F IM
3024 Orton St
St Charles, MO 63301
Brems, John J GS
1325 South Grand Blvd.
St. Louis, MO 63104
314-966-0638
Brennan, Danl J PS
621 S. New Ballas Rd.
Suite 1003
St Louis, MO 63141
314-567-3737
Brennan, Geo A OBG
10004 Kennerly Rd. #205
St. Louis, MO 63128
314-726-2205
Brennan, Robert A Jr. OBG
12810 Tesson Ferry Rd.
St. Louis, MO 63128
314-351-5700
Brennan, Robt A Sr. OBG
6030 Highfield
St Louis, MO 63109
314-752-3283
Brennan, Robt V U
533 Couch Ave. G-55
St. Louis, MO 63122
314-966-4862
Brewer, John R PD
2600 Hadley St.
St. Louis, MO 63106
314-241-2200
Bricker, Eugene M GS
43 Highgate Rd
St. Louis, MO 63132
Bridwell, Keith H ORS
4949 Barnes Hosp Plaza
St. Louis, MO 63110
314-362-4080
Brigham, David W OPH
14706 Manchester
Ballwin, MO 63011
314-391-0233
Brinkman, Robert A IM
522 N. New Ballas #349
St. Louis, MO 63141
314-567-3113
Brodeur, Armand E R
1465 S. Grand Blvd.
St. Louis, MO 63104
314-577-5654
Brody, Arnold G FP
3654 S. Grand #212
St. Louis, MO 63118
314-865-4700
Bronson, Shael S P
777 S New Ballas Rd
St Louis, MO 63141
314-872-8869
Brookes, Robt D P
224 So Woods Mill Rd.
Suite 360
Chesterfield, MO 63017
314-878-7048
Broun, Goronwy O Jr. IM
St. Louis Univ Med Ctr
3635 Vista Ave.
St. Louis, MO 63110
Brown, Barry D IM
6125 Clayton Suite 412
St. Louis, MO 63139
314-645-6161
Brown, Freeman F III AN
218 Hollyberry Ct
Manchester, MO 63011
314-391-6606
Brown, Seymour AN
2421 Baxton Way
Chesterfield, MO 63017
Bruce, Helen L PH
3438 Russell Blvd. Apt 301
St Louis, MO 63104
Bruns, Kenneth AN
3635 Vista at Grand
P.O. Box 15250
St. Louis, MO 63110
314-577-8000
Brunt, L. Michael GS
6432 Cecil Ave.
St. Louis, MO 63105
Bucholz, Richard D NS
3635 Vista Ave. at Grand
P. O. Box 15250
St. Louis, MO 63110
314-577-8797
Bucy, James G U
4949 Barnes Hosp Plaza
Suite 17302W
St Louis, MO 63110
314-361-4880
Budd, John J Jr. IM
9012 Manchester Rd
St Louis, MO 63144
314-962-2170
Budd, John J III IM
9012 Manchester
St. Louis, MO 63144
314-962-2170
Buettner, John Brigham GS
222 South Woods Mill #300N
Chesterfield, MO 63017
314-362-7272
Burdge, Robert E ORS
1325 S Grand Blvd
St Louis, MO 63104
314-577-8850
Burgdorf, Max H PD
12303 DePaul Dr.
Bridgeton, MO 63044
314-344-6000
Burgess, Dean OPH
4949 Barnes Hosp Plaza 17413
St Louis, MO 63110
314-367-1181
Burke, Robt J PD
16 Hampton Village Plaza
St Louis, MO 63109
314-832-2877
Burkhart, Edward F D
621 S New Ballas Rd #622
St Louis, MO 63141
314-567-5711
Burmeister, P. William IM
12818 Tesson Ferry Road
Suite 101
St. Louis, MO 63128
314-849-2277
Burns, Edward L IM
9701 Landmark Parkway Dr.
Suite 210
St. Louis, MO 63127
314-842-5211
Burns, Francis J CRS
6400 Clayton Road #110
St. Louis, MO 63117
314-645-6051
Burns, Michael F ORS
1035 Bellevue Ave. #102
St. Louis, MO 63117
Burr, Donald C R
RR 3 Box 178
Nashville, IL 62263
314-567-1644
Burst, Donald O OPS
HH 45 Ocean Reef Club
Key Largo, FL 33037
Burstein, Robert OBG
911 S Brentwood Blvd #325
St. Louis, MO 63105
314-721-8852
Busch, Anthony K P
6600 W. Main St.
Belleville, IL 62223
618-397-4466
Busse, Paul P R
1155 Rue La Chelle
St. Louis, MO 63141
Bussmann, Carl E GS
12255 DePaul #800
Bridgeton, MO 63044
Bussmann, Donald W CD
746 Fairfield Lake Drive
Chesterfield, MO 63017
Butsch, Richard H IM
335 Mid Rivers Dr.
St. Peters, MO 63376
Byrne, Robert M IM
5703-H Huntington Valley Ct
St. Louis, MO 63129
314-481-9264
Byrum, Fritz A FP
15360 Manchester
Ballwin, MO 63011
314-526-0061
Cabal, Edito R
818 Martin Lutheran King Dr.
E. St. Louis, IL 62201
Cabal, Maria PD
11701 Lakeshore Dr.
St. Louis, MO 63141
618-272-4700
Cabbabe, Edmond B PS
10004 Kennerly Rd. #200
St. Louis, MO 63128
314-567-9096
Cabral, Galileu IM
3009 N. Ballas Rd. Suite 304
St. Louis, MO 63131
314-878-4430
Caciolo, Carlo P IM
3654 S Grand Blvd #206
St Louis, MO 63118
Cacioppo, Jos E GP
1040 N Mason Rd #101
St Louis, MO 63141
314-878-5000
Cadice, John B OBG
1245 Graham Rd #408
Florissant, MO 63031
314-838-8000
Cajili, Antonio T IM
300 S Grand
St Louis, MO 63103
314-658-5647

---

*Doctor of osteopathy.

Callaghan, Gerard M OBG
1035 Bellevue #510
St Louis, MO 63117
314-644-4460

Callahan, Donald E R
719 Champeix Lane
St Louis, MO 63141

Callahan, Jos D CHP
111 S. Bemiston
St Louis, MO 63105
314-725-7371

Calodney, Martin M PD
8730 Teasdale Ave.
St. Louis, MO 63124

Campbell, Edward M PS
1325 Grand
St. Louis, MO 63104
314-577-8793

Campbell, J. William IM
114 N. Taylor Ave.
St. Louis, MO 63108
314-965-4291

Campos, Francisco J PTH
325 Carlyle Lake Drive
St. Louis, MO 63141

Canaan, Saml A OPH
5505 Delmar Blvd.
St Louis, MO 63112
314-367-7077

Cannon, Edward M U
14300 Conway Meadows Ct.108
Chesterfield, MO 63017

Cantor, Harvey E N
555 N. New Ballas Rd. #100
St Louis, MO 63141
314-569-0720

*Cantor, Sol F FP
4600 S. Lindbergh
St. Louis, MO 63127

Caplin, David A PS
456 N. New Ballas #129
St. Louis, MO 63141
314-569-0130

Carden, Juan O IM
11155 Dunn Rd. #213
St. Louis, MO 63136
314-432-8882

Carlin, M. Richard U
8 Winding Brook Lane
St. Louis, MO 63124

Carls, Garry L R
818 Upper Cahokia Rd.
Cahokia, IL 62206

Carlson, Arne E GS
89 Pebblebrook Lane
Creve Coeur, MO 63146

Carmody, John P IM
10004 Kennerly Rd. #386B
St. Louis, MO 63128
314-843-2151

Caronongan, Carmelito M GS
2304 Holbrook
Cairo, IL 62914
618-734-3338

Carranza, Mauro J FP
P O Box 10817
St Louis, MO 63129
314-789-3313

Carrier, John A IM
Rt 3, Box 69B
St. James, MO 65559

Carter, Edwin E ORS
621 S. New Ballas Rd.
St. Louis, MO 63141
314-567-5850

Cary, John M IM
13395 Conway Road
St. Louis, MO 63141
314-878-2460

Case, Mary E PTH
3556 Caroline
St Louis, MO 63104
314-664-9800

Casey, Arthur L OBG
12632 Bradford Woods Dr.
St. Louis, MO 63127
314-773-2003

Casey, Edwin J OPH
4466 W Pine
St Louis, MO 63108

Casey, Eliot C PD
621 S New Ballas #2003
St Louis, MO 63141
314-569-6150

Cason, Elbert H GS
1705 S Third
St. Louis, MO 63104
314-436-5100

Castaneda, Marco A GS
1325 S. Grand Blvd
St. Louis, MO 63104
314-577-8357

Castasus, Manuel A GS
600 N Union Blvd
St Louis, MO 63108
314-367-1828

Catanzaro, Anthony F FP
2705 Clifton Ave
St Louis, MO 63139
314-645-2517

Catanzaro, Frank J Jr. OPH
3009 N. Ballas Rd. #205
St. Louis, MO 63131
314-997-3210

Catanzaro, Frank J Sr. CD
1688 Frontenac Woods Lane
St Louis, MO 63131
314-569-5160

Catanzaro, Rudolph E GS
8131 Page Blvd
St Louis, MO 63130
314-429-5589

Chadaratana, Phadung OTO
4121 Union Rd #216
St Louis, MO 63129
314-487-9717

Chamness, James T PS
710 S. Hanley Rd.
St. Louis, MO 63105
314-872-7474

Chanasue, John A IM
11115 New Halls Ferry Rd.102
Florissant, MO 63033
314-839-4466

Charles, Benj H IM
2 Fielding Road
St Louis, MO 63124

Charles, Elaine Z PTH
645 S. New Ballas Road
Apt 3-D
St. Louis, MO 63141
314-569-2358

Charles, Francois CD
600 N Union
St Louis, MO 63108
314-367-1828

Charnas, Raymond M IM
1040 N Mason Rd. #112
St Louis, MO 63141
314-434-0772

Chavez, Salvador GS
120 N. Central
Eureka, MO 63025
314-938-6663

Chehval, Michael J U
621 S. New Ballas Rd. #362
St Louis, MO 63141
314-991-2626

Chen, James Z.W. TR
14014 Camberra Ct
Chesterfield, MO 63017
314-768-8268

Cheuk, Shu-Sum GS
224 S. Woods Mill Rd.
Suite 430
Chesterfield, MO 63017
314-576-0060

Chinsky, Murray IM
500 Northwest Plaza #501
St. Ann, MO 63074
314-291-6400

Chipongian, Raul A OPH
1672 Foxleigh Court
St Louis, MO 63131
314-291-5000

Chirino, Octavio R OBG
9701 Landmark Parkway Dr 207
St. Louis, MO 63127
314-842-4802

Chishti, M. Ishaq OPH
6651 Chippewa #322
St. Louis, MO 63109
314-781-3900

Chiu, Tai Mao AN
2220 Barnbridge Road
St. Louis, MO 63131
314-768-8300

Cho, Kyu S ORS
456 N New Ballas
Suite 369
St Louis, MO 63141
314-569-1830

Chod, Ronald J OBG
777 S. New Ballas Rd. #100E
St. Louis, MO 63141
314-567-7303

Chou, Yen Ping IM
2777 Ashfield
St. Louis, MO 63129
314-892-2468

Chu, Fred C OPH
660 S. Euclid #8096
St. Louis, MO 63110
314-454-6026

Chua, Steven IM
1125 Graham Road
Florissant, MO 63031
314-838-5700

Chusak, Richard B PS
3009 No Ballas Rd.
Suite 216
St Louis, MO 63131
314-567-5377

Ciapciak, Stanley J FP
30 Long Cabin
St Louis, MO 63124
314-621-2575

Claseman, Wilma W PH
3237 Longfellow Blvd
St Louis, MO 63104
314-658-1041

Claycomb, Gerald K DR
14 Crown Manor Lane
Chesterfield, MO 63005

Clement, Richard W PS
7101 E. Jackrabbit Rd.
Scottsdale, AZ 85253

Coates, James G IM
4444 Forest Park
St. Louis, MO 63108
314-241-0600

Cobb, Milton L AN
1425 Forest Ave.
St Louis, MO 63122
314-525-1000

Coben, Lawrence A N
660 S Euclid Box 8111
St Louis, MO 63110
314-362-7171

Cohen, Bruce H OPH
4949 Barnes Hospital Plaza
Suite 17423
St. Louis, MO 63110
314-361-5003

Cohen, Edward R
17 Vouga Lane
St. Louis, MO 63131
314-441-6730

Cohen, Frank IM
3130 Autumn Shores Dr.
Bridgeton, MO 63044

Cohen, Hillard K IM
500 Northwest Plaza #417
St Ann, MO 63074
314-729-9313

*Cohen, Raymond F N
530 Des Peres Rd.
St. Louis, MO 63131
314-878-4446

Cohen, Robert S OBG
2821 N Ballas Rd Ste 255
St Louis, MO 63131
314-872-9206

Coin, Richard E PS
1151 Westmore Place
St. Louis, MO 63131
314-489-2831

Cokrhame, Jack IM
1125 Graham Rd
Florissant, MO 63031
314-838-5700

Colbert, Dennis G IM
4488 Forest Park
St. Louis, MO 63108
314-771-3151

Cole, Harry O NS
224 South Woods Mill Rd.
Suite 610
Chesterfield, MO 63017
314-878-2888

Collins, John M GP
6928 Hampton Ave.
St. Louis, MO 63109

Comas, Manuel R OBG
1402 S. Grand Blvd.
St. Louis, MO 63104
314-664-9800

Comens, Ruth C AN
8826 Woodfox
St Louis, MO 63127
314-645-8510

Conner, Patrick R IM
800 N. Lindbergh
Creve Couer, MO 63167
314-694-8807

Connors, Robert H PDS
1465 S. Grand Blvd.
St. Louis, MO 63104
314-577-5629

Conrad, Marshall B ORS
456 N. New Ballas Suite 290
St. Louis, MO 63141
314-367-7138

Cook, Marvin R
5 Portland Drive
St Louis, MO 63131
314-842-5600

Cooksey, Jon D CD
3009 N. Ballas Ste. 310
St. Louis, MO 63131
314-645-4664

Cooper, Barry J A
10004 Kennerly Rd.
St. Louis, MO 63128
314-863-1577

Cooper, James F GS
12255 DePaul Dr #160
Bridgeton, MO 63044
314-291-8130

Cooper, Theodcre CD
7000 Portage Rd.
Kalamazoo, MI 49001

Cooper, Thomas J PTH
10010 Kennerly
St Louis, MO 63128
314-525-4025

---

*Doctor of osteopathy.

Coordes, Cordie C TS
222 S. Woods Mill Rd. #550
Chesterfield, MO 63017
314-434-3049
Copp, Ralph IM
4989 Barnes Hosp Plz #5107
St. Louis, MO 63110
314-361-0300
Corday, Robt J P
141 N. Meramec Suite 205
St. Louis, MO 63105
314-725-0422
Corder, James C IM
911 S. Brentwood Blvd.
St. Louis, MO 63105
314-862-5252
Coronado, Mario A OBG
10004 Kennerly Rd #350
St Louis, MO 63128
314-842-5583
Corvalan, Juan C P
10004 Kennerly Rd. #250
St Louis, MO 63128
314-849-3112
Corwin, Kenneth D PS
77 Westport Plaza #350
St. Louis, MO 63146
314-576-1911
Costello, Jos P IM
15145 Baxtor Court
Chesterfield, MO 63017
Costen, William S ORS
224 S. Woods Mill Rd.
Suite 330
Chesterfield, MO 63017
314-576-7013
Covert, Richard A FP
777 S. New Ballas
St. Louis, MO 63141
314-567-6581
Cox, James L TS
4989 Barnes Hosp Plaza #3108
St. Louis, MO 63110
314-362-6185
Cox, Mary E P
500 Mercer Manor
Ballwin, MO 63011
Coxe, Wm S NS
Box 8057 660 S. Euclid
St Louis, MO 63110
314-362-3576
Coyne, Patrick M OBG
1245 Graham Rd.#408
Florissant, MO 63031
314-838-1300
Cozart, Duane E IM
224 S. Woods Mill Rd. #500
Chesterfield, MO 63017
314-878-6260
Cradock, Thomas V PDS
1401 South Grand #429
St Louis, MO 63104
314-776-7700
Crafts, David NS
3635 Vista Ave. at Grand
St. Louis, MO 63110
314-577-8798
Craig, Alan G P
200 S. Sappington
St. Louis, MO 63122
Crandall, Richard E PS
1585 Woodlake Drive
Chesterfield, MO 63017
314-878-6300
Craver, Jeffrey L PTH
12303 DePaul Dr.
Bridgeton, MO 63044
314-344-6000
Crawford, Katherine J GS
112 Walnut Drive
Carrollton, MO 64633
Crepps, Louis F R
14321 Strawbridge Ct.
Chesterfield, MO 63017
314-569-6000
Crespin, Stephen R IM
777 S. New Ballas Rd.
St Louis, MO 63141
314-432-6688
Criscione, James R EM
3825 S. Kingshighway
St. Louis, MO 63109
314-965-5600
Criscione, James S AN
1837 Grassy Ridge
St. Louis, MO 63122
314-965-7000
Criscione, James R Sr. TS
6500 Chippewa #203
St Louis, MO 63109
314-353-1118
Crotty, John P TR
818 Upper Cahokia Rd
Cahokia, IL 62206
Croughan, Jack L P
1034 S. Brentwood
#970
St. Louis, MO 63117

Crumpacker, Margaret P
7477 Delmar Blvd.
St. Louis, MO 63130
314-727-8181
Cruz, Eligio C OBG
224 South Woods Mill Rd.
Suite 450
Chesterfield, MO 63017
314-434-2454
Cubillo, Enrique DR
232 S. Woods Mill Rd.
Chesterfield, MO 63017
Cuddihee, Robert E IM
621 S. New Ballas Rd.
St. Louis, MO 63141
314-569-6344
Cuento, Oblendo A GS
2425 N. Broadway
St. Louis, MO 63102
314-241-4455
Cullum, Albert G OTO
117 Petersborough
Middlesboro, KY 40965
Cunningham, Edwin J IM
1585 Woodlake Dr. #108
Chesterfield, MO 63017
314-434-3322
Custer, Philip L OPH
4949 Barnes Hosp Plaza
#17423
St. Louis, MO 63110
314-361-2698
Cusumano, Joseph V US
6319 Alexander Drive
St. Louis, MO 63105
Cutler, Harold M OTO
816 S. Hanley Apt. 4B
St. Louis, MO 63105
Czebrinski, Edward W IM
#10 Fordyce Manor
St. Louis, MO 63131
D'Souza, Benedict PTH
4501 A Manchester Rd.
St. Louis, MO 63110
314-432-8786
Daake, John W Sr. GS
48 Portland Pl
St Louis, MO 63108
Daake, John W Jr. GS
81 Waterman Place
St. Louis, MO 63112
314-843-1557
Dagartzikas, A K OBG
12902 Tundra
St. Louis, MO 63131
314-838-8000

Dahm, Chas H Jr. OBG
6125 Clayton Road
St. Louis, MO 63139
314-768-3220
Dalton, Arthur R GS
13129 Conway Road
St. Louis, MO 63141
314-726-5225
Dames, Richard J III IM
9012 Manchester Rd.
St Louis, MO 63144
314-962-2170
Dandamudi, Babu R FP
3655 Vista Ave.
St. Louis, MO 63110
314-832-7227
Danforth, Wm H IM
10 Glenview
St. Louis, MO 63124
Dang, Phung T
11133 Dunn Rd.
St. Louis, MO 63136
Daniels, John S IM
4989 Barnes Hospital Plaza
Suite 17416
St. Louis, MO 63110
314-362-5100
Danis, Richard K PDS
1401 S Grand
St Louis, MO 63104
314-776-7700
Dankner, Arnold IM
1570 Woodlake Dr.
Chesterfield, MO 63017
314-878-0996
Dankner, Rand E A
1570 Woodlake Dr.
Chesterfield, MO 63017
314-878-0996
Dash, Udaya N ORS
50 Daupine Drive
Lake St. Louis, MO 63367
Davidson, Morris OTO
35 N Central Ave #238
St. Louis, MO 63105
Davidson, Raymond P OBG
4444 Forest Pk Blvd RM 697
St. Louis, MO 63108
314-289-6295
Davis, Gene L DR
3009 N. Ballas Ste. 131
St Louis, MO 63131
314-432-5284

Davis, Marlou D FP
8417 Midland
St. Louis, MO 63114
314-576-1615
Davis, Martin W IM
12987 Pingry Place
St. Louis, MO 63131
Davis, Mary A P
456 N New Ballas Rd #282
St Louis, MO 63141
314-567-5707
Davis, Sheldon OTO
11155 Dunn Rd #201 N.
St Louis, MO 63136
314-355-7770
Deane, Louis V Jr. IM
621 S. New Ballas Rd. #3005
St. Louis, MO 63141
314-569-6168
Debnam, James W Jr. P
391 Madewood Lane
Chesterfield, MO 63017
314-355-6565
Deckert, James J FP
14170 Forest Crest
Chesterfield, MO 63017
314-569-6010
Deeths, Tony M DR
135 Laduemont Dr
St. Louis, MO 63141
314-567-4350
Dehner, Jonathan D R
26 Lorenzo Lane
St. Louis, MO 63124
314-997-4482
Deitchman, Robt B P
5247 Fyler
St. Louis, MO 63139
Del Rosario, Horacio O OM
966 Cabernet Dr.
Chesterfield, MO 63017
314-327-2154
Del Valle, Fernando P
777 S New Ballas Ste W
St Louis, MO 63141
314-569-0811
Denes, Bela U
11155 Dunn Rd. #206E
St. Louis, MO 63136
314-644-4829
Denk, Alan F GS
3017 Fallbrook
St Louis, MO 63131
314-644-6300
Dennison, Carl F FP
2626 N. Broadway
St. Louis, MO 63118
314-241-5804
Deshpande, V IM
15345 Country Ridge Dr.
Chesterfield, MO 63017
314-344-6365
Deutch, Max PD
29 Willow Hill Rd
St Louis, MO 63124
Devabhaktuni, Rama Devi FP
327 Royal Village Dr.
Manchester, MO 63011
314-394-0339
Devine, John B PUD
85 Willmore Rd
St Louis, MO 63109
314-351-4105
Devineni, V. Rao R
4939 Audubon Suite 5500
St. Louis, MO 63110
314-362-7034
Dew, Thomas A PUD
224 S. Woods Mill
Chesterfield, MO 63017
314-576-6700
Dewald, Paul A P
4524 Forest Park Blvd #200
St Louis, MO 63108
314-367-5817
Dewein, Edward G P
621 S New Ballas Rd
St Louis, MO 63141
314-567-9871
DeBoard, James W AN
1325 S. Grand Blvd.
St. Louis, MO 63104
314-577-8750
DeGuerre, Ronald K U
224 S. Woods Mill Rd. #510
Chesterfield, MO 63107
314-434-3433
DeMarchena, Octavio N
Barnes Hosp Plaza Ste 16304
St. Louis, MO 63110
314-367-3122
DeSilva, Ananda PD
1245 Graham Rd.
Suite 503
Florissant, MO 63031
314-838-1166
DeUngria, Pablo C OBG
6400 Clayton Road #402
St Louis, MO 63117
314-644-6633

---

*Doctor of osteopathy.

DeVera, Anson F AN
5085 Reynosa Dr
St Louis, MO 63128
314-894-1371
Dickler, Donald J AN
833 Audubon Dr
St. Louis, MO 63105
314-454-7954
Diehl, Elizabeth W PD
1205 Childress Ave.
St. Louis, MO 63139
314-647-7948
Diemer, David P R
1450 Bluebird Terrace
St. Louis, MO 63144
314-962-7175
Diemer, Kathryn M OBG
1450 Bluebird Terrace
St. Louis, MO 63144
314-962-7175
Diemer, Peter A R
12302 Ironstone Road
St. Louis, MO 63131
314-878-4680
Diestelhorst, James A IM
3009 N. Ballas Rd. Suite 304
St. Louis, MO 63131
314-878-4430
Dillard, Burl M GS
533 Couch Ave. #G90
St. Louis, MO 63122
314-821-1883
Dilworth, Jacquelyn B D
1035 Chartres Ave.
St. Louis, MO 63132
314-432-0156
DiCecco, Charles J IM
1905 Falling Tree Ct.
Chesterfield, MO 63005
314-831-6304
DiLeo, Senatro W OBG
34 Ridgetop
St. Louis, MO 63117
DiPasco, Donald J IM
533 Couch Ave. Suite 255
St Louis, MO 63122
314-822-9400
Dmytryk, Eugene T GS
305 W. Jackson Rd.
St. Louis, MO 63119
314-567-9928
Dodge, Philip R CHN
410 N. Newstead
St Louis, MO 63108
314-454-6005
Dodson, William E NS
Childrens Hosp
400 S. Kingshighway
St. Louis, MO 63110
314-454-6087
Doerr, Dale E ORS
3533 S. Jefferson Suite 317
St. Louis, MO 63118
314-664-8600
Dohrn-Weisman, Renate OBG
#33 Woodcrest Dr.
St. Louis, MO 63124
314-291-3770
Doisy, Philip P IM
9383 Pine Ave.
St. Louis, MO 63144
314-822-0635
Doisy, Robt A IM
103 Edwin
St. Louis, MO 63122
314-821-5051
Dolan, Patrick H AN
947 Town & Country Estates
St. Louis, MO 63141
Dolan, Renee C IM
947 Town & Country Estates
Town & Country, MO 63141
Donahoe, James L PD
37 West Brentmoor
Clayton, MO 63105
Donati, Robt M NM
1402 S. Grand
St Louis, MO 63104
314-664-9800
Donley, Leo F GS
2425 N Broadway
St Louis, MO 63102
314-241-4455
Donovan, John F GS
10007 Kennerly Rd.
St Louis, MO 63128
314-849-2727
Donovan, Thos J OTO
615 S. New Ballas Rd. #7008
St Louis, MO 63141
314-725-4994
Dooley, Joseph M Jr. N
315 Oakwood Ave.
St. Louis, MO 63119
314-878-1911

Dorton, Robt K IM
911 S Brentwood Blvd #220
St Louis, MO 63105
314-862-5252
Dowell, Geo H P
3009 N Ballas Rd.
Suite #110
St Louis, MO 63131
314-567-5000
Doyle, Chas R GS
9053 Monmouth Dr.
St Louis, MO 63117
Drace, Charles C Jr. GS
9313 Manchester Suite 109
St Louis, MO 63119
314-962-3200
Drake, William L Jr. PTH
537 Lee Ave.
St Louis, MO 63119
Drescher, Emmett B GS
619 Haverford Rd.
St Louis, MO 63124
314-725-8444
Drews, Robt C OPH
211 N Meramec #204
St Louis, MO 63105
314-721-0854
Drey, Norman W IM
816 South Hanley Road
St. Louis, MO 63105
314-863-1211
Dreyer, Carl J OBG
45 Glen Road
St. Louis, MO 63119
314-961-2981
Drozda, Joseph P Jr. CD
12255 Depaul Dr. #460
Bridgeton, MO 63044
314-291-8824
Duemler, Robt H OBG
12166 Old Big Bend Blvd #100
St. Louis, MO 63122
314-821-3500
Duffy, Francis G AN
8116 University Dr
St. Louis, MO 63105
314-361-1212
Duggan, John J Jr. OBG
c/o Mr. George Duggan
31 Quail Wood Drive
Fenton, MO 63026
Dugger, David E OBG
11132 S. Towne Square #104
St. Louis, MO 63123
314-894-6700
Dumadag, Virgilio P PTH
3015 N Ballas Rd
St Louis, MO 63131
314-432-1212
Dunn, Robert C Jr. NS
621 S. New Ballas Rd.
St. Louis, MO 63141
314-569-3620
Durbin, Patrick H IM
30 Willow Drive
Fairview Hghts, IL 62208
618-398-6106
Durel, Justin H OBG
2821 N. Ballas Rd.
St. Louis, MO 63131
314-872-7400
Durr, Jon W PTH
795 Office Parkway Suite 118
St. Louis, MO 63141
314-432-1850
DuMontier, Alan J FP
16826 Kehrsbrooke
Chesterfield, MO 63005
314-532-9494
Dyer, Dallas J IM
3915 Watson Rd
St Louis, MO 63109
314-644-7100
Dzundzev, Penco T FP
16 Hampton Village Plaza
St Louis, MO 63109
314-832-2191
Eachempati, Rama G NM
Box 6 2nd General Hospital
Landstuhl Army Reg Ctr
A.P.O., NY 09180
Eachempati, Uma R OBG
4150 Jeffco Blvd.
Arnold, MO 63010
314-464-1000
Eades, Joseph W PS
4910 Forest Park #314
St. Louis, MO 63108
314-367-5012
Ebel, Eugene H PD
1230 Hollins Dr.
St. Louis, MO 63135
Ebel, James E IM
4107 Union Rd.
St. Louis, MO 63129
314-894-5575
Eberle, Vincent L OBG
2821 N. Ballas Rd. #105
St Louis, MO 63131
314-846-2694

Eck, Birkle IM
950 Francis Place #211
St Louis, MO 63105
314-726-2828
Ecker, Desider B FP
222 Glenellen
Sun City, FL 33570
Eckert, Clarence T GS
2295 Gulf Of Mexico Dr
Apt. 82 - South
Longboat Key, FL 34228
Edele, Eugene H FP
3890 Federer Pl
St Louis, MO 63116
314-352-3770
Edelman, Alan H DR
3009 N. Ballas Ste. 131
St. Louis, MO 63131
314-432-5284
Edwards, James E CHP
Psychiatric Ctr/Creve Coeur
12520 Olive Blvd.
St. Louis, 63141
314-569-6586
Edwards, Jos C IM
610 W. Polo Drive
Clayton, MO 63105
Egan, Robert C GS
1034 S. Brentwood Blvd. #776
St. Louis, MO 63117
314-892-3500
Egan, Thos F R
9852 Northbridge
St Louis, MO 63124
314-434-1500
Eggleston, Harry C OPH
621 S New Ballas Rd #228
St Louis, MO 63141
314-872-8824
Eggleston, Thos F OPH
621 S New Ballas #5003
St Louis, MO 63141
314-991-5533
Ehrlich, Carl F OTO
3009 N Ballas Rd. #212
Suite 212
St Louis, MO 63131
314-567-6533
Eidelman, Jack R P
141 N Meramec
St Louis, MO 63105
314-862-0555
Eisen, Arthur Z D
Wash Univ Div of Derm #8123
660 S. Euclid Ave.
St. Louis, MO 63110
314-362-8180
Ekunno, Josiah O OBG
4651 Natural Bridge Box 5340
St. Louis, MO 63115
314-385-9904
Elcock-Skimming, Devera M FP
2326 Claymoor Dr.
Chesterfield, MO 63017
314-525-1905
Eliasson, Sven G N
660 S Euclid
St Louis, MO 63110
314-362-7171
Eller, Chas H PH
250 E Alameda #515
Santa Fe, NM 87501
Ellersieck, Dorothy M FP
11160 Village North Dr.
Apt Oakwood 117
St Louis, MO 63136
Ellsasser, James C ORS
1034 Brentwood Blvd #294
St Louis, MO 63117
314-725-0881
Emeran, George J U
600 North Union
St Louis, MO 63108
314-367-1828
Epstein, James M IM
3009 N. Ballas Rd. #100
St Louis, MO 63131
314-432-1111
Ernst, Edwin C Jr. R
8 Coach-N-Four
St. Louis, MO 63131
Ernst, Edwin C III DR
12457 Balwyck
St. Louis, MO 63131
Ernst, Jos G IM
325 North Kirkwood
St. Louis, MO 63122
314-966-7265
Ernst, Richard E R
23 Villa Coublay
St. Louis, MO 63131
314-291-0340
Ernst, Roland P R
12327 Creekhaven
St. Louis, MO 63131
Escoffery, Richard F OPH
1245 Graham Rd. Suite 107
Florissant, MO 63031
Esslinger, Arthur T OBG
1762 Bay St. Apt 303
Sarasota, FL 34236

---

*Doctor of osteopathy.

Esther, James H IM
3009 N Ballas Suite 100
St. Louis, MO 63131
314-432-1111

Eto, Jackson K PD
41 Lake Forest
St. Louis, MO 63117
314-644-2727

Ettelson, Charles D PS
222 S Woods Mill Rd. #700-N
Chesterfield, MO 63017
314-878-7770

Evans, Lawrence G Jr. ORS
950 Francis Place #14
St Louis, MO 63105
314-862-2012

Evens, Ronald G R
510 S Kingshighway
St Louis, MO 63110
314-362-7100

Eversoll, Norton J OS
3301 Water Oaks Drive
Hollywood, FL 33021

Exarhou, Klark GS
3009 N. Ballas Rd. #206
St Louis, MO 63131
314-569-3838

Fabian, Leonard W AN
660 S Euclid
St Louis, MO 63110
314-362-6973

Fabito, Daniel C GS
10004 Kennerly Rd. #208B
St. Louis, MO 63128
314-849-1499

Fabito, Melinda C IM
3009 N. Ballas Rd. #202
St. Louis, MO 63131

Fallon, Richard H GS
10845 Olive Blvd
St. Louis, MO 63141
314-362-7831

Farberman, Elliott PD
1125 Graham Rd. Suite 6
Florissant, MO 63031
314-921-7509

Faron, Mark A IM
493 St. Francois St.
Florissant, MO 63031

Farrell, John S IM
12255 DePaul Dr. #460
Bridgeton, MO 63044
314-291-8824

Farzana, Farida P
100 N. Euclid Ste #501
St. Louis, MO 63105
314-361-6885

Fathman, Anthony E U
224 S. Woods Mill Rd.
Suite 510
Chesterfield, MO 63017
314-434-3433

Favors, Adolphus C Jr. IM
13045 Tesson Ferry Rd.
St. Louis, MO 63128
913-474-4100

Fehlman, Bernard F AN
918 S. Meramec Ave.
St. Louis, MO 63105
314-771-7600

Feibel, Robt M OPH
1034 S Brentwood Blvd
St Louis, MO 63117
314-727-6716

Feigl, Alexander J U
2015 Alfred
St. Louis, MO 63110
314-771-0006

Feit, Robert M U
6500 Chippewa St. #108
St. Louis, MO 63109
314-351-0155

Feldman, David IM
11501 Lakeshore Dr
St Louis, MO 63141
314-569-2611

Feliciano, Wilfrido C PS
11155 Dunn Rd. #202E
St. Louis, MO 63136
314-567-9096

Felix, Robt H P
10501 Indian Wells Dr
Sun City, AZ 85373

Feller, Harold H FP
5834 Bermuda #D
St. Louis, MO 63121

Felts, James A AN
660 S. Euclid Ave.
St Louis, MO 63110
314-362-6973

Ferguson, Thos B CDS
4989 Barnes Hosp Plaza
St Louis, MO 63110
314-361-0122

Ferrara, Robert P IM
986 Delvin Drive
St. Louis, MO 63141

Ferrendelli, James A N
517 S. Euclid Ave.
St Louis, MO 63110
314-362-7815

Ferris, Charles W Jr. PTH
3015 N. Ballas Rd.
St. Louis, MO 63131
314-432-1212

Ferry, Richard J N
141 Meramec St #315
St. Louis, MO 63105
314-726-3202

Figueroa, Edduyn CHP
1245 Graham Rd. #505
Florissant, MO 63031
314-434-6260

Figueroa, Eliseo O IM
11155 Dunn Rd #102
St Louis, MO 63136
314-355-2180

Fingert, Hyman H P
4542 Maryland Ave.
St Louis, MO 63108
314-367-6623

Fink, Leroy L GS
11155 Dunn Rd. #303E
St Louis, MO 63136

Finkel, Barney W FP
238 Caviller Ct
N Ft. Myers, FL 33917

Finnegan, Jos V IM
11153 Clarissa Drive
St Louis, MO 63141

Fiordelisi, Rocco J GS
6400 Clayton Rd. #107
St Louis, MO 63117
314-644-4220

Fiore, Andrew C TS
6420 Clayton Rd.
St. Louis, MO 63117
314-768-8709

Fischbein, Lewis C RHU
4949 Barnes Hosp. Plaza
Suite #16422
St. Louis, MO 63110
314-367-9595

Fischer, John R P
P. O. Box 283
Herman, MO 65041

Fischer, Robert IM
533 Couch Ave
St. Louis, MO 63122
314-966-0500

Fish, Virgil O GS
2500 Town & Country La.
St Louis, MO 63131
314-721-5488

Fisher, Linda IM
4664 Pershing Place
St. Louis, MO 63108
314-725-0511

Fitch, Coy D IM
1325 S Grand Blvd
St Louis, MO 63104
314-577-8760

Fivian, Gerald J OPH
2821 N Ballas Rd #240
St Louis, MO 63131
314-432-2655

Flance, Israel J PUD
4652 Maryland
St Louis, MO 63108
314-267-3113

Fleishman, Alfred IM
920 Guelbreth Lane #106
St Louis, MO 63141

Fleshman, James W CRS
216 S. Kingshighway
St. Louis, MO 63110
314-454-7177

Fletes, James W FP
7270 Natural Bridge Ave
St Louis, MO 63121
314-383-2156

Flores, Jhonson E AN
442 Cheshire Farm Ct.
St. Louis, MO 63141

Floro, Kenneth E Jr. GS
7822 Tanager Ct.
St. Louis, MO 63119
314-644-2202

Floro, Mariano N GS
11115 New Hallas Ferry
Florissant, MO 63033
314-839-0366

Flotte, Bernard H IM
6 Lila Lane
Florissant, MO 63033

Flotte, Sylvester A IM
11155 Dunn Rd. #207N
St Louis, MO 63136
314-355-8349

Flug, Eric J PD
8919 Pine Acre Rd.
St. Louis, MO 63124
314-966-3324

Flury, Kirk E IM
533 Couch Ave. Ste. 180
St. Louis, MO 63122
314-822-3122

Flye, M. Wayne TS
4989 Barnes Hosp Plaza #5108
St. Louis, MO 63110
314-362-7145

Flynn, Edward IM
9730 E. Watson Rd. #2
St. Louis, MO 63126
314-843-7000

Flynn, John T FP
6627 Bancroft Ave.
St Louis, MO 63109
314-771-2078

Fogarty, William M Jr. IM
3915 Watson Rd
St Louis, MO 63109
314-644-7100

Forand, Joseph M AN
7401 Granbury Circle
St. Louis, MO 63123
314-832-1839

Ford, Lee T ORS
4949 Barnes Hospital Plaza
Suite 11300 W. Pavilion
St Louis, MO 63110
314-362-4080

Ford, Thomas E OPH
2168 Amy Drive #4
Niagara Falls, NY 14304

Forsman, Waldo W IM
4128 S. Lindbergh
St Louis, MO 63127

Forsyth, B. Todd IM
159 North Central
St. Louis, MO 63105

Fox, Leon J ORS
903 So. Warson Rd.
St Louis, MO 63124

Fox, Robert E IM
1642 Timberlake Manor Pkway
Chesterfield, MO 63017

Fox, Thomas J ORS
6400 Clayton Rd.
St. Louis, MO 63117
314-647-8562

Francisco, Dominic S R
13667 Peacockfarm Rd.
St. Louis, MO 63131
314-567-4350

Franklin, Harold A IM
606 S. Meramec
St Louis, MO 63105

Franklin, Max S CD
585 Coeur De Royale #401
St Louis, MO 63141

Frantz, David W TS
2000 Tate Springs Rd.
Lynchburg, VA 24501
314-569-5287

Fraser, Danl M TS
1035 Bellevue Ave #211
St Louis, MO 63117
314-644-6300

Frawley, Thos F IM
621 S. New Ballas Rd. #1013
St. Louis, MO 63141
314-569-6934

Frederick, Raymond O GS
6125 Clayton Ave. Suite 424
St. Louis, MO 63139
314-645-8200

Frederickson, Neil W IM
1035 Bellevue
St. Louis, MO 63117
314-645-1344

Fredrickson, John M OTO
Dept of Oto.
517 S. Euclid #8115
St. Louis, MO 63110
314-454-2426

Freedman, Ruth S OPH
10287 Clayton Road #400
St Louis, MO 63124
314-991-1172

Friedman, Paul L AN
7332 Cornell
St Louis, MO 63130
314-768-8300

Friedman, Robt H PD
3009 N. Ballas Rd. #230
St. Louis, MO 63131
314-432-8602

Friedman, William H OTO
Deaconess Med Off Ctr
6125 Clayton #430
St. Louis, MO 63139
314-771-8887

Friedrich, Anthony F EM
716 Hidden Lake Dr.
St. Peters, MO 63376
314-441-0400

Fries, John W R
9002 Sedgwick Place Dr.
St. Louis, MO 63124
314-842-5600

Frumson, Guy H ORS
12255 DePaul #250
Bridgeton, MO 63044
314-355-1877

---

*Doctor of osteopathy.

Fry, Robert D GS
216 S. Kingshighway
P.O. Box 14109
St. Louis, MO 63178
314-454-7177
Fuleihan, Farid M U
621 S New Ballas #322
St Louis, MO 63141
314-569-6296
Fuller, Terry A P
110 S. Central Suite 400
St. Louis, MO 63105
314-862-6007
Funsch, Robert E ORS
7221 Greenway
St Louis, MO 63130
314-645-4600
Furla, August J FP
57 Broadview Dr.
St Louis, MO 63105
314-962-4480
Gabrawy, Laila G CPH
422 Scottfield Terrace.
Manchester, MO 63011
314-469-3001
Gado, Mokhtar H N
510 S. Kingshighway
St. Louis, MO 63110
314-362-5950
Gafford, Franklin H IV IM
10004 Kennerly Rd.
St. Louis, MO 63128
314-843-2151
Gagliardo, Joseph P
141 N Meramec #303
St. Louis, MO 63105
314-726-5390
Galakatos, Andrew E OBG
224 S Woods Mill Road
Suite 750
Chesterfield, MO 63017
314-576-9797
Gale, Arthur H IM
2428 Woodson
St. Louis, MO 63114
314-427-2424
Gall, Ira C OBG
621 S. New Ballas #4005
St Louis, MO 63141
314-567-5016
Gandlmayr, Jack M FP
1040 N Mason Rd #104
St Louis, MO 63141
314-434-7400
Gans, Lawrence A OPH
Box 8096 660 S. Euclid
St. Louis, MO 63110
314-362-7157
Gansloser, Wilbert M P
230 S. Brentwood
Clayton, MO 63105
Garcia, Delia M ONC
232 S. Woods Mill Rd.
Chesterfield, MO 63017
314-434-2092
Garcia-Ferrer, Eduardo A P
6460 SW 21st
Miami, FL 33155
Garcia-Ferrer, Eduardo L P
1058 Dutchmill Dr.
Manchester, MO 63011
314-391-6726
Garfinkel, Bernard T IM
522 N New Ballas Rd #149
St Louis, MO 63141
314-567-1902
Garrett, Ted E CDS
621 S. New Ballas Rd. #6017
St. Louis, MO 63141
314-569-6970
Garriga, Francisco J IM
11655 West Florissant
Florissant, MO 63033
314-921-4420
Garvin, Charles F R
232 S. Woods Mill Rd.
Chesterfield, MO 63017
314-991-0335
Garvin, Paul J GS
1325 S. Grand Blvd.
St. Louis, MO 63104
314-771-7600
Garvin, Todd J GS
2211 Lomas Blvd NE Div of Ur
Univ of New Mexico
Albuquerque, NM 87131
Gaskin, Fred W P
1034 S. Brentwood Suite 1200
St. Louis, MO 63117
314-721-1011
Gavini, Rajendra R GS
6500 Chippewa St. Ste. 118
St Louis, MO 63109
314-352-1422
Gearhart, Wilbur H P
3009 N. Ballas Rd.
Suite 110
St Louis, MO 63131
314-567-5000

Gedney, Wm B IM
806 Meramec Station Rd
Valley Park, MO 63088
314-825-2423
Geise, August W NS
224 S. Woods Mill #610
Chesterfield, MO 63017
314-878-2888
Geisse, Guillermo R
6150 Oakland
St Louis, MO 63139
314-645-8505
Gellman, Elliot F PD
456 N New Ballas Rd #220
St Louis, MO 63141
314-872-8662
Gennaoui, Jad M DR
10010 Kennerly
St. Louis, MO 63128
314-525-1155
Gentsch, Kenneth W CD
3009 N. Ballas Rd. #100
St. Louis, MO 63131
George, Philip G ORS
1034 S Brentwood Blvd #650
St Louis, MO 63117
314-721-7325
Gerber, William R OBG
6450 Devonshire
St. Louis, MO 63109
314-353-4482
Gercwin, Lance GS
9408 W Milton
St Louis, MO 63114
314-427-4616
Gerst, Aloysius C PD
2005 Kingsgate
St. Louis, MO 63138
Ghosh, Nellie CD
950 Francis Place
St. Louis, MO 63105
314-725-2383
Gibson, Paul H IM
533 Couch
St. Louis, MO 63122
314-725-3703
Gieselman, Ralph V IM
224 S. Woods Mill Rd. #500
Chesterfield, MO 63017
314-878-6260
Gilden, Jerome J ORS
4910 Forest Park #306
St. Louis, MO 63108
314-454-8700
Gilpin, Doris C CHP
2 Delcrest Ct. #101
St. Louis, MO 63124
Gilula, Louis A DR
250 Dielman Rd
St Louis, MO 63124
314-362-2916
Gimpelson, Richard J OBG
222 So Woods Mill Ste. 400
Chesterfield, MO 63017
314-878-1866
Ginsburg, Jordan H ORS
522 N New Ballas Rd #392
St Louis, MO 63141
314-432-5065
Ginther, James W Jr. IM
6500 Chippewa
St. Louis, MO 63109
314-427-1855
Gladney, John H OTO
100 N Euclid Ave., Ste. 70
St Louis, MO 63108
314-361-8300
Glazer, Harvey S DR
510 S. Kingshighway
St. Louis, MO 63110
314-721-2852
Glines, Michael H PD
12 Meramec Hgts Shopping Ctr
Arnold, MO 63010
314-296-4466
Glogovac, S. Vic ORS
12255 DePaul Dr. #360
Bridgeton, MO 63044
314-291-7181
Gnade, Albert J GS
1052 King Henry Ct.
St Louis, MO 63146
Godar, Sharon A FP
453 Greenstone Dr.
Chesterfield, MO 63017
Goebel, Joan M AN
7655 Watson Rd. #435
St. Louis, MO 63119
Goebel, Joel A OTO
4911 Barnes Hosp Plaza
St. Louis, MO 63110
314-362-7552
Goell, Robert S OBG
5720 Westminster Place
St. Louis, MO 63112
314-362-7831
Gold, Jonathan A NS
11155 Dunn Rd. #211-N
St. Louis, MO 63136
314-291-6556

Goldfarb, Alvin GS
514 Coeur De Royale Dr. #405
St Louis, MO 63141
314-569-0130
Goldman, Arnold M IM
522 N New Ballas Rd #149
St Louis, MO 63141
314-567-1902
Goldman, Gordon M OBG
77 Westport Plaza
Suite 265
St. Louis, MO 63141
314-878-7333
Goldman, Hyman J D
6512 Franks Road
House Springs, MO 63051
413-253-9695
Goldman, Melvin L IM
8631 Delmar #201
St Louis, MO 63124
314-993-2400
Goldring, David PDC
340 N. Price Rd.
St Louis, MO 63124
314-454-6000
Goldring, Sidney NS
Barnes Hosp Plaza
St Louis, MO 63110
314-362-3571
Goldstein, Benjamin IM
2428 Woodson Rd
St Louis, MO 63114
314-427-2424
Goldstein, Marcy A PS
11026 Lindblade
Culver City, CA 90230
Goltschman, John P CPH
900 N Hwy 67 Lindbergh
Florissant, MO 63031
314-838-0300
Gomez, Cesar A GS
3009 North Ballas Rd.
Suite 114
St Louis, MO 63131
314-569-2333
Gonzalez, Alicia D P
777 S. New Ballas Rd. #326W
St. Louis, MO 63141
314-432-7375
Goodenberger, Daniel M IM
441 Oakley Drive
St. Louis, MO 63105
314-362-6904
Goodman, Nathaniel FP
#9 Scarsdale Lane
St Louis, MO 63117
Goodrich, Steven D OPH
10672 Country View Dr.
St. Louis, MO 63141
Goran, David A IM
7171 Delmar Blvd.
St. Louis, MO 63130
314-863-0033
Gordon, Glenn L IM
14th & Main
Quincy, IL 62301
314-645-3400
Gordon, James M OPH
11155 Dunn Rd #120N
St Louis, MO 63136
314-355-7300
Gottlieb, Charlene C IM
6338 San Bonita
St. Louis, MO 63105
314-534-8600
Gould, Ronald J GE
1035 Bellevue Ave. #407
St. Louis, MO 63117
314-645-1344
Gowda, Siddhesh CD
222 So. Woods Mill Rd. #500
Chesterfield, MO 63017
314-851-2936
Grady, Ronald K IM
224 S. Woods Mill Rd. #370
Chesterfield, MO 63017
314-878-2467
Grand, M. Gilbert OPH
4949 Barnes Hosp Plaza 17413
St. Louis, MO 63110
314-367-1181
Grant, John M IM
114 N. Taylor Ave.
St Louis, MO 63108
314-534-8600
Grant, Neville IM
114 N. Taylor Ave.
St Louis, MO 63108
314-534-8600
Graul, Walter P ORS
3434 Tanglewood Terrace
Palm Harbor, FL 33563
Graviss, Edward R DR
1465 S. Grand
St. Louis, MO 63104
314-577-5600
Gray, Gary J IM
911 S Brentwood #208
St Louis, MO 63105
314-727-5336

---

*Doctor of osteopathy

Green, Morton R OPH
111 W. Lincoln
Belleville, IL 62221
618-234-1774
Green, Wm R FP
7200 Manchester
St Louis, MO 63143
314-645-7744
Greenwald, James E IM
6224 Washington Ave.
St. Louis, MO 63110
314-726-3036
Gregory, John G U
3635 Vista Ave at Grand Blvd
P.O.Box 15250
St. Louis, MO 63110
314-771-7600
Gresick, Robert J Jr. DR
1100 Thornwood Drive
St. Louis, MO 63124
314-993-1401
Gresick, Robt J PTH
6420 Clayton Rd.
St Louis, MO 63117
314-768-8201
Griffin, Anthony C GS
7824 Rosedale Drive
St. Louis, MO 63121
314-389-5205
Grubb, Robt L NS
4901 Barnes Hosp Plaza
St Louis, MO 63110
314-362-3567
Grundmann, Wm H ORS
12028 Rosevalley Lane
St Louis, MO 63138
314-721-1700
Gulick, C. Richard OBG
1034 S Brentwood
St Louis, MO 63117
314-725-9300
Gunn, Walter T FP
4617 Dahlia Ave.
St Louis, MO 63116
314-752-2120
Gupta, Jitendra K IM
14377 Woodlake #101
Chesterfield, MO 63017
314-434-7475
Gursahani, Mohan U
950 Francis Place #214
St Louis, MO 63105
314-863-3800
Gutierrez-Medina, Ernesto IM
525 St. Francois
Florissant, MO 63031
837-372-0000
Gutwein, Michael B IM
3009 North Ballas Rd.
Suite 100
St. Louis, MO 63131
314-432-1111
Guy, Cynthia S AN
23 Sackston Woods
St. Louis, MO 63141
314-569-1653
Guyol, William B Jr. IM
911 Brentwood #208
St. Louis, MO 63105
314-966-5520
Guze, Saml B P
660 S. Euclid Ave. #1812
St Louis, MO 63110
314-362-7005
Habert, Edward F R
10010 Kennerly Rd.
St Louis, MO 63128
314-842-5600
Haddock, James N P
111 Firwood Drive
St Louis, MO 63119
314-863-9001
Hagebusch, Omer E PTH
c/o Guaranty Trust
7701 Forsyth Blvd #1200
St. Louis, MO 63105
Hagemann, Paul O IM
23 Frontenac Estates.
St. Louis, MO 63131
314-878-7220
Hagen, Duane Q P
621 S New Ballas Rd #2008
St Louis, MO 63141
314-569-6295
Hagen, Garrett A IM
1035 Bellevue #502
St. Louis, MO 63117
314-645-3400
Haggerty, Jesse C III FP
5400 Eichelberger #2
St. Louis, MO 63109
314-352-2742
Hahn, Yoram OBG
6400 Clayton Rd. #402
St. Louis, MO 63117
314-644-3288
Hale, Thomas H IM
13611 Barrett Office Drive
Manchester, MO 63021
Halford, Richard PS
1040 N Mason Rd Ste 205
St Louis, MO 63141
314-878-4530
Hall, Preston C FP
39 Woodcrest Dr
St Louis, MO 63124
Halley, R H U
11155 Dunn Rd Ste 214
St Louis, MO 63136
314-355-5544
Halloran, Mark J IM
621 S New Ballas Rd #460
St. Louis, MO 63141
314-432-3456
Halverson, John D GS
4989 Barnes Hosp Plaza #5101
St Louis, MO 63110
314-362-7411
Hamilton, Caldwell K PD
11317 Mosley Lane
St. Louis, MO 63141
Hamilton, Eugene G OBG
222 S. Woods Mill Rd. #620
Chesterfield, MO 63017
314-781-3838
Hamilton, William P CD
12828 Fourwinds
St Louis, MO 63131
314-569-6168
Hammerman, Albert M DR
148 Wyckcliffe Place
St. Louis, MO 63141
Hammerman, Harley J DR
6 Jungerman #L4
St. Peters, MO 63376
314-441-6730
Hammerman, Marc R IM
660 S. Euclid Ave. Box 8121
St. Louis, MO 63110
314-362-7024
Hammond, D. Wade ORS
533 Couch Ave. Suite 220
St. Louis, MO 63122
314-966-0111
Hammond, David T CD
3009 N. Ballas Rd.
St Louis, MO 63131
314-432-1111
Hampton, Stanley F A
12 Maryhill Circle
St Louis, MO 63124
Hanaway, Jos N
6400 Clayton #405
St Louis, MO 63117
314-454-1962
Handler, Michael R
12565 Starspur Lane
St. Louis, MO 63146
314-878-5254
Hanes, Lily A TR
P.O. Box 104 RR1
Golden Eagle, IL 62036
Hanley, Thomas P OBG
1035 Bellevue #208
St. Louis, MO 63117
314-644-6262
*Hanson, Lesley A IM
7224 Lindell Blvd.
St. Louis, MO 63130
314-644-2716
Hantman, Stephen L IM
11155 Dunn Rd. # 312E
St. Louis, MO 63136
314-355-8111
Hanto, Douglas W GS
4989 Barnes Hospital Plaza
Suite 5108
St. Louis, MO 63110
314-362-7320
Hantz, Oscar OTO
1265 Graham Rd.
Florissant, MO 63031
314-878-9089
Hardin, Wm B N
3009 No Ballas Rd.
Suite 209
St Louis, MO 63131
314-567-3663
Hardy, David A U
911 S Brentwood Blvd #228
St. Louis, MO 63105
314-725-6551
Hardy, Guerdan OTO
3009 N. Ballas Rd. #228
St. Louis, MO 63131
314-991-0330
Hardy, Jeffery A R
1034 S. Brentwood
St. Louis, MO 63117
314-727-0012
Hardy, Patrick J IM
1125 Graham Rd
Florissant, MO 63031
314-838-5700
Hardy, Samuel W IM
621 S. New Ballas
St. Louis, MO 63141
Harell, Alex ORS
10 Rio Vista Drive
St. Louis, MO 63124
Harford, Carl G IM
660 S. Euclid Ave.
St Louis, MO 63110
314-362-6899
Harper, Fleming B GS
4989 Barnes Hosp Plaza #6103
St Louis, MO 63110
314-362-7888
Harrison, Lee B IM
44 Ridgemoor Dr
St. Louis, MO 63105
Harrison, Richard L P
9007 Sun Country Trail
St. Louis, MO 63126
314-821-2737
Harshman, David M IM
1035 Bellevue Ave Suite 316
St. Louis, MO 63117
314-644-3250
Hart, William G Jr. PS
12225 Sunny Terrace
St. Louis, MO 63122
314-567-3737
Hart, William M Jr. OPH
660 South Euclid
St Louis, MO 63110
314-362-7180
Hartman, Paul T P
RR #1, Box 230
Biggsville, IL 61418
Hartman, Richard A OBG
911 S. Brentwood Blvd. # 325
St. Louis, MO 63105
314-721-8852
Hartnett, Anna E P
11 South Meramec
St. Louis, MO 63105
314-727-7700
Hartnett, Thos D P
11 S Meramec
St Louis, MO 63105
314-727-7700
Hartstein, Jack OPH
224 S. Woodsmill Rd. #700
Chesterfield, MO 63017
314-469-1122
Harwell, J. Larry PD
950 Francis Place
Med West Bldg #302
St. Louis, MO 63105
314-726-6464
Hasenmueller, James J GS
10004 Kennerly Rd
Suite 110
St Louis, MO 63128
314-842-1890
Hasik, Karl J OBG
70 Jungerman Circle #101
St. Peters, MO 63376
314-946-1331
Hatfalvi, Bela I AN
15 Middlesex Dr
St Louis, MO 63144
Hatlelid, J. Michael N
6400 Clayton #405
St. Louis, MO 63117
314-454-1962
Haueisen, David C ORS
12615 Old Tesson Road
St. Louis, MO 63128
314-849-0311
Haupt, Herbert A ORS
224 S. Woods Mill Rd #290
Chesterfield, MO 63017
314-878-6011
Hawatmeh, Ibrahim S U
10004 Kennerly #289B
St. Louis, MO 63128
314-353-9000
Hawatmeh, Isam S IM
2512 Bopp Rd.
St. Louis, MO 63131
314-773-7857
Hawk, Bray O GS
16 Hampton Village # 273
St Louis, MO 63109
314-481-3833
Hawker, Wm D OBG
14547 Tramore
Chesterfield, MO 63017
Hawkins, Geo L NS
31 Swamp Creek Rd.
Trout Creek, MT 59874
Hayden, Richard E OTO
4911 Barnes Hospital
St. Louis, MO 63110
314-362-7530
Hazan, Joseph OBG
2428 Woodson Rd.
St Louis, MO 63114
314-567-4373
Headrick, John A IM
11133 Dunn Rd # B202
St Louis, MO 63136
314-355-2300

---

*Doctor of osteopathy.

Hegde, Korgi V IM
3915 Watson Rd
St Louis, MO 63109
314-644-7100
Heins, James N IM
631 E. Monroe Ave.
St Louis, MO 63122
314-432-1111
Heller, Randall L Jr. OBG
1034 Brentwood Suite 946
St. Louis, MO 63117
314-725-9300
Hellweg, Raymond W PD
3220 Parker Rd
Florissant, MO 63033
314-921-4500
Hernandez, Salvador R ORS
12615 Old Tesson Rd.
St. Louis, MO 63128
314-849-0311
Herriford, Merle B U
4520 Newstead Terrace
St. Louis, MO 63115
Herrmann, Virginia M GS
3635 Vista Ave. at Grand
P. O. Box 15250
St. Louis, MO 63110
314-771-7600
Hershey, Falls B GS
11 Wydown Terrace
St. Louis, MO 63105
Hertel, Ronald C ORS
1034 S Brentwood Blvd #650
St. Louis, MO 63117
314-721-7325
Herzog, Godofredo M OBG
77 Westport Plaza
Suite 265
St. Louis, MO 63141
314-878-7333
Herzog, Jacques A OTO
6125 Clayton Rd.
St. Louis, MO 63139
314-768-3222
Hesker, Albert E R
232 S. Woods Mill Rd.
Chesterfield, MO 63017
314-434-1500
Hess, John P IM
3009 N. Ballas Road
St. Louis, MO 63131
314-432-2535
Heusler, Anton F P
9111 Clayton Rd.
St. Louis, MO 63124
314-291-7449
Heutel, Lee B FP
7200 Manchester
St Louis, MO 63143
314-645-7744
Hickey, James L CPG
621 S New Ballas Rd
St Louis, MO 63141
314-567-5515
Hicks, Frederick G P
3009 No. Ballas
St. Louis, MO 63131
314-567-5000
Hicks, Robert S P
777 S New Ballas Rd
St Louis, MO 63141
314-569-2266
Higgins, Philip C OBG
621 S. New Ballas Rd. #207
St Louis, MO 63141
314-432-8505
Hilbert, Paul H FP
2905 Cherokee St
St Louis, MO 63118
314-771-2428
Hildreth, H. Rommel OPH
13900 Clayton Rd.
Ballwin, MO 63011
Hill, M. Robert IM
6150 Oakland Ave.
St. Louis, MO 63139
314-645-8510
Hill, XaCadene A FP
4257 St. Louis Ave.
St. Louis, MO 63115
Hinrichs, James H IM
300 First Capitol Drive
St. Charles, MO 63301
314-947-5420
Hintze, Paul F IM
431 Forsheer
Ballwin, MO 63011
314-469-6224
Hironimus, John E D
6651 Chippewa St #207
St Louis, MO 63109
314-645-5320
Hirshberg, Gary E AN
6316 Waterman Ave.
St. Louis, MO 63130
314-362-6973

Ho, Judith E PD
615 South New Ballas Rd.
St. Louis, MO 63141
314-569-6463
Hobbs, John E OBG
907 Lariat Dr.
Eugene, OR 97402
Hoehn, John P III GS
621 S. New Ballas Rd. #676
St. Louis, MO 63141
314-567-9928
Hoffman, Mark J DR
15 Ridgemoor Drive
St. Louis, MO 63105
314-441-6500
Hoffman, William F N
11155 Dunn Rd. #211N
St. Louis, MO 63136
314-291-6556
Hoffmann, Ronald E ORS
950 Francis Place Ste 14
St. Louis, MO 63105
314-662-2012
Hoffmann, Sandra S IM
7495 S. Lindbergh
St. Louis, MO 63125
314-894-0257
Hofstatter, Leopold N
768 Glen Vista Dr
St Louis, MO 63122
314-644-8107
Hogan, Cornelius E IM
3650 Loughborough
St Louis, MO 63119
314-773-0898
Hogan, John R IM
1035 Bellevue Ave. # 414
St Louis, MO 63117
314-644-6161
Hogan, Patrick C OBG
10004 Kennerly Rd
St Louis, MO 63128
314-642-3445
Hogan, Patrick A N
1034 S Brentwood #840
St Louis, MO 63117
314-725-1522
Holder, Barrett K ORS
3009 North Ballas Rd.
St. Louis, MO 63131
314-569-0612
Holemon, R. Eugene P
3009 N. Ballas Rd.
Suite #110
St Louis, MO 63131
314-567-5000
Hollo, Vencel W GS
200 S. Brentwood Blvd. #7D
St. Louis, MO 63105
Hollocher, Richard J ORS
621 S. New Ballas Rd. #5015
St. Louis, MO 63141
314-567-5850
Holloway, Robert B AN
915 N. Grand Blvd.
VA Hospital
St. Louis, MO 63106
Holmes, Nancy E PD
8515 Delmar #217
St. Louis, MO 63124
314-721-2262
Holt, Wm E P
11900 Conway Rd.
St. Louis, MO 63131
314-367-3077
Holtmann, Barbel PS
One Barnes Hosp Plz #17424
St. Louis, MO 63110
314-362-6973
Holtz, Alan S GS
4525 Laclede Ave.
St. Louis, MO 63108
Holtz, Sumner DR
232 S. Woods Mill
Chesterfield, MO 63017
314-361-1212
Hookerman, Bruce J D
12255 DePaul Dr #390
Bridgeton, MO 63044
314-291-2588
Hooper, Anthony C DR
4350 Bridgeland Suite C
Bridgeton, MO 63044
314-291-0340
Horan, John J Jr. PD
9701 Landmark Parkway
St. Louis, MO 63127
314-849-3885
Horenstein, Simon N
3655 Vista Ave.
St. Louis, MO 63110
314-567-7366
Horner, John L IM
615 Garland Pl
St Louis, MO. 63122
Horwitz, Irwin B ORS
900 S. Hanley Road #100
Clayton, MO 63105

Houck, William E OBG
1034 S. Brentwood Blvd. #946
St. Louis, MO 63117
314-725-9300
Houserman, Virginia L OBG
14440 White Birch Valley La
Chesterfield, MO 63017
314-768-8780
Howe, Albert L IM
31 York Drive
St. Louis, MO 63144
314-658-5641
Hruska, Keith A IM
216 S. Kingshighway
St. Louis, MO 63110
314-454-7771
Hruza, George J D
One Barnes Hospital Plaza
Suite 16411
St. Louis, MO 63110
314-362-5599
Hubert, John P Jr. GS
10004 Kennerly Rd. #103
St. Louis, MO 63128
314-843-5197
Hubert, John W IM
12255 DePaul Dr.
Bridgeton, MO 63044
314-291-7730
Huck, Richard F Jr. IM
2821 N Ballas #150
St Louis, MO 63131
314-872-9310
Hudgens, Richard W P
777 S New Ballas Rd # 234 E
St Louis, MO 63141
314-569-2266
Huffaker, William H PS
224 S Woods Mill Rd. #470
Chesterfield, MO 63017
314-567-9096
Huggins, Albert M IM
6651 Chippewa St # 214
St Louis, MO 63109
314-644-3997
Hughes, Robt G OM
11745 Olive St. Rd. # 202
St Louis, MO 63141
314-567-5770
Hulbert, Bernard IM
8112 Delmar Blvd
St Louis, MO 63130
314-725-7400
Hulbert, Laura R OBG
32 Ladue Estates
St. Louis, MO 63141
314-487-5227
Hummel, Anton J OPH
5203 Chippewa St
St Louis, MO 63109
314-352-1881
Hummel, Wm C R
456 N. New Ballas Rd. #195
St Louis, MO 63141
314-567-1656
Hunleth, Frank E OBG
5331 Donovan Ave.
St Louis, MO 63109
314-842-7910
*Hunter, Harlen C ORS
14377 Woodlake Dr. Suite 311
Chesterfield, MO 63017
314-878-4446
Hurley, Joseph J GS
621 S New Ballas Rd
St Louis, MO 63141
314-567-6666
Hutchinson, James H IM
2805 N. Geyer Rd.
St Louis, MO 63131
Hutchinson, William B DR
3009 N. Ballas Ste.131
St Louis, MO 63131
314-432-5284
Ikeda, Shigemasa AN
1325 S Grand
St Louis, MO 63104
314-771-7600
Inman, Max M IM
314 Travertine Lane
Chesterfield, MO 63017
314-644-7100
Ip, Aidan W PD
2821 Ballas Rd.
St. Louis, MO 63131
314-965-0558
Ishida, Yasuo OBG
6744 Clayton Rd # 305
St Louis, MO 63117
314-645-6100
Isserman, Michael J OPH
456 N. New Ballas Rd. #118
St Louis, MO 63141
314-432-1134
Ittner, Geo W IM
35 N. Central
St Louis, MO 63105
Iwane, Akira AN
1801 Summer Blossom Place
Chesterfield, MO 63017
314-256-8840

---

*Doctor of osteopathy.

Izmirlian, Grant FP
1040 N Mason Rd
St Louis, MO 63141
314-434-7444
Jablonski, Raymond C R
9088 Fernald
St. Louis, MO 63123
Jackson, Darwin C OBG
6125 Clayton Suite 211
St. Louis, MO 63139
314-644-5144
Jacob, Karl A NS
777 S. New Ballas Rd. #129 W
St Louis, MO 63141
Jacobs, Allan J OBG
Dept OBG 1325 S. Grand Blvd.
4th Floor N.
St. Louis, MO 63104
314-577-8755
Jacobs, Chas C OTO
111 Church St. # 212
St Louis, MO 63135
314-521-1414
Jacobs, Frederick A PD
10929 Abbott Ave
Sun City, AZ 85351
Jain, Savitri G IM
13 Brentmoor Park
St Louis, MO 63105
314-821-9140
Jain, Sumer C AN
12122 Carberry Pl
St. Louis, MO 63131
314-344-7047
Jarvis, Cathy C IM
493 St. Francois
Florissant, MO 63031
314-391-5652
Jatala, Ijaz A P
1810 Manor Hill Rd
St Louis, MO 63131
314-621-4300
Javdan, Ron IM
14220 Tullytown
Chesterfield, MO 63017
314-434-1399
Jean, J T IM
550 S. Brentwood Blvd. #28C
St. Louis, MO 63105
Jenny, Arthur B NS
600 S. Euclid #507
St. Louis, MO 63110
314-362-3580
Jensen, Joshua E II GS
11155 Dunn Rd.
St. Louis, MO 63136
314-741-3400
Jensen, Joshua E GS
995 Sword Ct.
P. O. Box 173
Lake Sherwood, MO 63357
Jick, Sidney CD
10287 Clayton Rd #200
St. Louis, MO 63124
314-997-3212
Joffe, Wm S OPH
211 N Meramec Ave #301
St. Louis, MO 63105
314-726-0025
Johans, Thomas G AN
621 S. New Ballas
St. Louis, MO 63141
314-872-8221
Johnson, Chas J PS
11709 Old Ballas Apt. 201
St. Louis, MO 63141
314-993-8281
Johnson, Frank E GS
3635 Vista At Grand
P.O.Box 15250
St. Louis, MO 63110
314-771-7600
Johnson, Michael K OBG
7605 Natural Bridge Rd. #101
St. Louis, MO 63121
314-385-7001
Johnson, Randy G IM
Cardiology & Critical Care
5453 Chippewa
St. Louis, MO 63109
314-351-8880
Johnson, Steven M PTH
925 Coal Bank Road
St. Louis, MO 63138
Johnson, Tom A FP
615 So New Ballas Rd
St Louis, MO 63141
314-569-6010
Johnston, Glen P OPH
1221 Judy Circle T.D.L.
Bonne Terre, MO 63628
Johnstone, John T IM
206 W Argonne # 201
St. Louis, MO 63122
314-966-3400
Jones, Bruce N ORS
224 Woods Mill Rd. South
Suite 255
Chesterfield, MO 63017
Jones, Dorothy J PD
One McKnight Place #119
St. Louis, MO 63124
Jones, Georgia A P
621 S. New Ballas Suite 374
St. Louis, MO 63141
314-569-2048
Jones, James H OPH
1035 Bellevue Ave
St Louis, MO 63117
314-647-4034
Jones, Otey S FP
2010 Longfellow
St Louis, MO 63104
Jones, Richard A IM
332 Calvert Ave.
St. Louis, MO 63110
314-567-4174
Joseph, Harold J IM
3009 N. Ballas #315
St. Louis, MO 63131
314-872-8740
Joslyn, Harold L GE
1930 Tile Factory Rd.
Mt Vernon, IN 47620
Jost, Charles A FP
118 Doubloon Drive
N. Ft. Myers, FL 33917
Jost, R. Gilbert DR
Mallinckrodt Inst of Rad
510 S. Kingshighway
St. Louis,, MO 63110
314-362-7130
Jotte, Richard F FP
10300 St Charles Rock Rd
St Ann, MO 63074
314-427-2022
Jotte, Richard P IM
10300 St. Charles Rock Rd.
St. Ann, MO 63074
314-427-2022
Judd, Donald R TS
6125 Clayton Ave. #302
St. Louis, MO 63139
314-649-5525
Juergens, Wm G IM
1034 S Brentwood Blvd
St Louis, MO 63117
314-721-0666
Julien, Rene GS
P. O. Box 852
E. St. Louis, IL 62203
314-997-6504
Kairuz, Bartolome C FP
10004 Kennerly Rd
St Louis, MO 63128
314-843-4444
Kaiser, Geo C GS
1325 S Grand Blvd
St Louis, MO 63104
314-771-7600
Kaiser, Larry R TS
One Barnes Hosp. Plz #3107
St. Louis, MO 63110
314-362-6025
Kamakas, Nicholas C PD
1245 Graham Rd
Florissant, MO 63031
314-838-3800
Kamel El-Din, Ali S AN
14376 Appalachian Trails
Chesterfield, MO 63017
314-469-1131
Kamenetzky, Stephen A OPH
4910 Forest Park
Suite 300
St Louis, MO 63108
314-367-0074
Kaminski, Donald L GS
1325 South Grand Blvd.
St Louis, MO 63104
314-577-6125
Kang, Johanna J AN
1547 Walpole
Chesterfield, MO 63017
314-362-6978
Kang, Juan PTH
11133 Dunn
St Louis, MO 63136
314-355-2300
Kantor, Owen IM
4949 Barnes Hospital Plaza
Suite #16422
St Louis, MO 63110
314-367-9595
Kaplan, Alex H P
4524 Forest Park Blvd # 208
St Louis, MO 63108
314-367-6243
Kaplan, Henry J OPH
660 S. Euclid Ave. Box 8096
St. Louis, MO 63110
314-362-3744
Kappesser, Netajean G FP
55 Fair Oaks Dr
St Louis, MO 63124
314-966-1500
Kappesser, Roland C AN
55 Fair Oaks
St Louis, MO 63124
Kardesch, Milton IM
9293 Watson Rd.
St Louis, MO 63126
314-962-9878
Karl, Michael M IM
14 Thorndell Dr.
St. Louis, MO 63117
Karsh, Robt S IM
2428 Woodson Rd
St Louis, MO 63114
314-427-2424
Kass, Michael A OPH
660 S Euclid
St Louis, MO 63110
314-362-7088
Katsantonis, George OTO
6125 Clayton Ave.
St. Louis, MO 63139
314-647-5854
Kaufman, Robt L IM
456 N New Ballas Rd
Suite 299
St Louis, MO 63141
314-569-1090
Kaup, Chandra S IM
1125 Graham Rd
Florissant, MO 63031
314-838-5700
Kayes, Jack OPH
211 N Meramec # 202
St Louis, MO 63105
314-863-4200
Kaza, Ramarao U
3655 Vista Ave. Lower Level
St Louis, MO 63110
314-832-7227
Keating, James P PD
400 S. Kingshighway
St Louis, MO 63110
314-454-6006
Keffler, Karl L FP
430 Clif-Side Dr.
St Louis, MO 63122
314-781-3737
Keller, Maurice J PD
9049 Clayton Rd.
St Louis, MO 63117
Keller, Stephen M R
307 Cabin Grove Lane
St. Louis, MO 63141
314-569-6000
Kellett, John G FP
2900 Lemay Ferry Rd.
St. Louis, MO 63125
314-892-3500
Kelly, John J IM
3009 No. Ballas Rd.
St Louis, MO 63131
314-432-1111
Kelly, R E OM
665 S. Skinker
St Louis, MO 63105
314-621-4300
Keltner, Raymond M Jr. GS
3635 Vista At Grand
P.O.Box 15250
St. Louis, MO 63110
314-771-7600
Kemp, Michele E PD
1585 Woodlake Drive
Chesterfield, MO 63017
314-878-2786
Kendis, Jos B IM
900 S. Hanley #3E
St. Louis, MO 63105
314-567-5011
Kenneally, Cynthia Z OPH
621 S. New Ballas #5018
St. Louis, MO 63141
314-567-5602
Kennedy, David G NS
1416 S. Big Bend
St. Louis, MO 63117
314-544-3433
Kenney, John D ORS
6400 Clayton Road
St Louis, MO 63117
314-645-6051
Kennington, L J FP
14382 Woodlake Dr.
Chesterfield, MO 63017
314-434-3333
Kessel, James W OBG
3009 N. Ballas Rd. Suite 142
St Louis, MO 63131
314-432-8388
Kessler, Sheldon PD
12255 DePaul Dr., Suite 490
Bridgeton, MO 63044
314-739-5333
Keyes, Edward L GS
900 S Hanley Rd
St Louis, MO 63105
Khan, Abdul G PD
4150 Jeffco Blvd.
Arnold, MO 63010
314-464-1000

---

*Doctor of osteopathy.

Khan, Altaf A GE
325 N. Kirkwood # 210
St Louis, MO 63122
314-966-6790
Kibby, Thomas B OM
819 Locust St.
St. Louis, MO 63101
314-621-4300
Kielmovitch, Izak H OTO
6125 Clayton Ave. Suite 430
St. Louis, MO 63139
314-768-3222
Kienzle, Edward FP
P. O. Box 356
Bonne Terre, MO 63628
Kilgore, John W IM
6400 Clayton Rd. #212
St. Louis, MO 63117
314-533-3494
Kilker, Donald E FP
3472 Bridgeland Dr. #A
Bridgeton, MO 63044
314-291-8686
Kilo, Chas IM
1227 Fernridge Parkway #110
St Louis, MO 63141
314-567-5529
Kim, Stanley W R
777 S New Ballas
St Louis, MO 63141
314-567-4350
Kim, William W AN
1325 S Grand Blvd
St Louis, MO 63104
314-771-7600
Kimelman, Nathan IM
21 Granada Way
St Louis, MO 63124
King, Donald K IM
7943 Big Bend Blvd.
St. Louis, MO 63119
314-962-7820
King, Eustace E III FP
1559 Charlemont Dr.
Chesterfield, MO 63017
King, Francis C FP
1 Whitehall Ct
St. Louis, MO 63144
King, Gregory S PTH
11133 Dunn Rd. (LAB)
St. Louis, MO 63136
314-355-2300
King, John V Sr. FP
488 Flanders Dr.
St Louis, MO 63122
King, John V Jr. PUD
3394 McKelvey Rd.
Bridgeton, MO 63044
314-739-5070
King, M. Kenton IM
660 S Euclid
St Louis, MO 63110
314-362-6830
Kingsland, Robert C IM
10 Brookwood Rd.
St Louis, MO 63131
Kinsella, Edward D GE
1035 Bellevue
St. Louis, MO 63117
314-645-1344
Kinsella, Peter W IM
1035 Bellevue
St Louis, MO 63117
Kinsella, Ralph A Jr. IM
#53 Hanley Downs
St. Louis, MO 63117
Kipnis, David M IM
660 S Euclid
St Louis, MO 63110
314-362-7020
Kissane, John M PTH
660 S. Euclid
St Louis, MO 63110
314-362-7440
Kissel, John H IM
6934 Delmar Blvd.
St. Louis, MO 63130
314-362-4985
Kistler, W. David Jr. IM
950 Francis Place # 113 W
St. Louis, MO 63105
314-721-0411
Kistner, Wm F PUD
621 S New Ballas Rd
St Louis, MO 63141
314-569-3161
Kitchen, Alice D P
1221 South Grand Ave.
St. Louis, MO 63104
314-771-6400
Kitchin, Winston H P
6400 Clayton Rd., Suite 412
St. Louis, MO 63117
314-647-9100
Kiyanclar, M. Emin AN
2451 Oak Springs Lane
St. Louis, MO 63131
314-227-0324

Klearman, Micki IM
One Barnes Hosp Plz #3107
St. Louis, MO 63110
314-367-9595
Klein, Bert H FP
3559 Via Del Estornino
Green Valley, AZ 85614
Klein, Saul J U
456 N New Ballas Rd # 315
St Louis, MO 63141
314-567-6071
Kletzker, George R OTO
517 South Euclid Box 8115
St. Louis, MO 63110
314-362-7552
Klippel, Allen P GS
1646 Timberlake Manor Pkwy
Chesterfield, MO 63017
314-678-2922
Knight, James W GS
7520 Natural Bridge
Suite 101
St. Louis, MO 63121
314-385-7300
Knight, Wm A Jr. GE
1035 Bellevue Ave. # 503
St Louis, MO 63117
314-645-3400
Knock, Henry L PD
325 N. Kirkwood Rd.
St. Louis, MO 63122
314-966-8728
Knopf, Harry L OPH
211 N Meramec St # 202
St. Louis, MO 63105
314-863-4200
Knowles, R. Raymond P
1034 S. Brentwood Blvd #754
St. Louis, MO 63117
314-725-0667
Kodner, Ira J CRS
216 S. Kingshighway
St Louis, MO 63110
314-454-7177
Koehler, Geo A IM
224 S. Woods Mill Rd.
Chesterfield, MO 63017
314-576-5014
Koenig, Marvin I OPH
900 N Lindbergh
Florissant, MO 63031
314-838-0300
Koerner, Kenneth A PD
12940 Topping Estates
St Louis, MO 63131
314-432-1854
Kofkoff, Richard L PS
2452 Centerline Industrial
Maryland Height, MO 63043
314-644-6615
Kolker, Allan E OPH
4901 Barnes Hosp plz
St Louis, MO 63110
314-362-7159
Kopelson, Jeffrey C FP
18-5 Woods Brooke Circle
Ossining, NY 10562
914-945-0546
Kopen, Dan F GS
480 Pierce
Kingston, PA 18704
314-569-6441
Kopp, Shelby K OM
11124 Apache Trail
St. Louis, MO 63146
Korenblat, Phillip E A
10287 Clayton Rd
St Louis, MO 63124
314-997-3212
Korn, Robt L PD
25 Broadview Farm Rd
St. Louis, MO 63141
314-537-0377
Kotner, Lawrence M Sr. IM
10358 Chimmey Rock Apt 14
St. Louis, MO 63146
Kotner, Lawrence M Jr. R
270 Bellington Lane
St. Louis, MO 63141
Kouchoukos, Nicholas T GS
216 S. Kingshighway
St. Louis, MO 63110
314-454-7175
Kountz, Paul D Jr. DR
321 West Adams
Kirkwood, MO 63122
314-991-1971
Kovac, S. Robert OBG
621 S. New Ballas Rd. #7011
St Louis, MO 63141
314-991-0300
Kowert, Edward H P
4949 Barnes Hosp Plz #16303
St Louis, MO 63110
314-367-3829
Kraeger, Russell R TS
533 Couch Ave. #171
St Louis, MO 63122
314-965-9660

Kraemer, Bruce A PS
4949 Barnes Hospital Plaza
Suite 17424
St. Louis, MO 63110
314-362-7388
Kraetsch, Robert E IM
4949 Barnes Hospital Plaza
Suite #16422
St Louis, MO 63110
314-367-9595
Krain, Samuel R
17 Briar Cliff
St Louis, MO 63124
314-721-0242
Kraner, Justin F OBG
2428 Woodson
St. Louis, MO 63114
314-567-4373
Krantman, Herbert J A
777 S. New Ballas Rd. # 102F
St. Louis, MO 63141
314-569-2015
Kraybill, William G GS
Dept of Surgery Wash Univ
Box 8109 4960 Audubon
St. Louis, MO 63110
Kreisman, Jerold J P
621 S. New Ballas Rd. # 4009
St. Louis, MO 63141
314-997-3443
Kreski, Kenneth C IM
3830 Four Ridge Rd.
House Spring, MO 63051
314-647-3990
Kretchmar, Alan P OPH
3009 N Ballas Rd. #213
St Louis, MO 63131
314-872-7263
Krettek, John E NS
224 S. Woods Mill Rd. #610
Chesterfield, MO 63017
314-878-2888
Kreusser, Katherine L PD
8025 Dale Ave.
St. Louis, MO 63117
314-872-8591
Krewet, Frank A III IM
12538 Windmoor Pl
St Louis, MO 63131
314-622-1630
Krieger, John L AN
28 Berry Road Park
St. Louis, MO 63122
314-961-3820
Kriegshauser, James W IM
3915 Watson Rd.
St. Louis, MO 63109
314-644-7100
Kriegshauser, Lawrence A ORS
12615 Old Tesson Rd.
St. Louis, MO 63128
314-849-0311
Kroeger, Geo B Jr. OTO
621 S New Ballas Rd
St Louis, MO 63141
314-567-9230
Krojanker, David N P
7468 Ahern Ct. #A
St. Louis, MO 63130
Krojanker, Rolf J P
6651 Chippewa # 315
St Louis, MO 63109
314-644-2395
Kromer, Chas J IM
3545 Lafayette
St Louis, MO 63104
314-664-6500
Kronemer, Norton S PD
9701 Landmark Parkway Drive
St. Louis, MO 63127
Krummenacher, Thomas K OPH
1034 S. Brentwood Blvd.
St. Louis, MO 63117
314-865-3210
Kuczer, Arnoldo OTO
14715 Timberway Court
Chesterfield, MO 63017
314-532-5320
Kuebel, Richard J IM
12033 Robyn Park Dr.
St. Louis, MO 63131
314-567-1992
Kuhlengel, Barbara G P
777 S. New Ballas #330 W
St. Louis, MO 63141
314-432-8281
Kuhlman, Ralph F IM
1034 S Brentwood Blvd
St Louis, MO 63117
314-721-0666
Kuhlman, Robert E ORS
4989 Barnes Hospital Plaza
#16301
St Louis, MO 63110
314-367-4338
Kuhn, Lawrence F P
621 S New Ballas
St. Louis, MO 63141
314-997-3443

---

*Doctor of osteopathy.

Kulak, Gary P
621 S New Ballas
St Louis, MO 63141
314-567-4470
Kulkarni, Nandini S AN
621 S. New Ballas Rd. # 137
St. Louis, MO 63141
314-569-2688
Kumar, Ravi S AN
23 Castle Point Drive
Belleville, IL 62223
Kumari, Vijaya OBG
3009 North Ballas Rd. # 208
St. Louis, MO 63131
314-872-9200
Kunst, Edward J IM
13611 Barrett Office Dr.
Ballwin, MO 63021
Kwan, Vicente W IM
1 Kwan Plaza
Potosi, MO 63664
314-438-5424
Kyaw, Myo M OR
11133 Dunn Rd
St Louis, MO 63136
314-355-6565
L'Ecuyer, Jerome L PD
9313 Manchester Rd # 103
St Louis, MO 63119
Ladd, Charles B GP
13045 Tesson Ferry
St. Louis, MO 63128
314-843-8700
Laird, John M IM
3009 N. Ballas Rd.
Suite 108
St. Louis, MO 63131
314-872-3620
Lam, Ernesto S GS
142 E Lockwood
St Louis, MO 63119
314-961-4848
Lamb, Wanda P
456 N New Ballas Rd
Suite 282
St Louis, MO 63141
314-567-5707
Lamping, J. Daniels OBG
621 S. New Ballas # 7002
St. Louis, MO 63141
314-991-3070
Lampros, William P OTO
621 S. New Ballas #149
St. Louis, MO 63141
314-781-6212
Landau, David W IM
11155 Dunn Rd #308E
St. Louis, MO 63136
Landau, Wm M N
660 S Euclid Ave
St Louis, MO 63110
314-362-7177
Lander, Robert C ORS
522 N New Ballas #392
St Louis, MO 63141
314-432-5065
Landry, J. Hubert R
13133 Conway Road
St. Louis, MO 63141
Landy, Richard PTH
6150 Oakland Ave.
St Louis, MO 63139
314-432-1850
Lane, Clinton W D
950 Francis Pl
St Louis, MO 63105
314-862-0992
Lane, Danl K D
950 Francis Pl
St Louis, MO 63105
314-862-0992
Lang, John J P
507 Fairways Circle
St Louis, MO 63141
314-434-1500
Lange, David R ORS
3165 McKelvey Rd. #100
Bridgeton, MO 63044
314-344-6900
Lanier, Earl W FP
2386 N. Hwy 67
Florissant, MO 63033
314-837-0030
Lansche, W. Edward ORS
3009 N. Ballas
St. Louis, MO 63131
314-569-0612
Lappas, Demetrios G AN
12909 Topping Estates Dr.
St. Louis, MO 63131
314-965-7943
Larocca, Felix E. F. CHP
6125 Clayton Suite 215
St Louis, MO 63139
314-567-4080
Larson, Paul U IM
6223 Southland
St Louis, MO 63109
314-664-5500

Lattinville, Henry E NS
12255 DePaul Dr.
Bridgeton, MO 63044
314-291-6556
Lauber, Jos J FP
615 S New Ballas Rd
St Louis, MO 63141
314-569-6010
Lauter, Steven IM
3009 N. Ballas #315
St. Louis, MO 63131
314-872-8740
Laux, France A PTH
795 Office Parkway Suite 118
St. Louis, MO 63141
314-432-1850
Lawrence, Geo H N
1919 Leisure World
Mesa, AZ 85206
Lawton, John T IM
1040 N. Mason Rd. Suite 209
Creve Coeur, MO 63141
314-878-6550
LaDriere, Raymond J PD
7545 Parkdale #3-S
St. Louis, MO 63105
Leach, Wilfred OTO
10004 Kennerly Rd.
St Louis, MO 63128
314-849-1116
Leary, Darl J P
2445 Copper Beech
St Louis, MO 63131
314-567-4442
Lee, Fransiska A ONC
615 So. New Ballas Rd.
St Louis, MO 63141
314-569-6844
Lee, Joseph King Tak R
510 S. Kingshighway
St. Louis, MO 63110
314-362-1053
Lee, Leander K AN
137 Frontenac Forest
St. Louis, MO 63131
314-432-1212
Lehman, Robert B IM
3009 N. Ballas Rd. Ste 100
St. Louis, MO 63131
314-432-1111
Leidenfrost, Ronald D IM
222 S. Woods Mill Rd. #550
Chesterfield, MO 63017
314-434-3049
Leightner, Wm F IM
550 Bedford
St Louis, MO 63130
314-487-4390
Leming, Bert H PTH
11714 Craigview Dr
St Louis, MO 63141
Lenobel, Milton I ORS
3660 Gulf of Mexico
Apt. A 201
Longboat Key, FL 34228
813-383-3030
Leonhardt, Erwin M IM
10004 Kennerly Rd.
Suite 335
St Louis, MO 63128
314-843-3800
Lepor, Herbert U
216 S. Kingshighway
St. Louis, MO 63110
314-454-7178
Lerwick, Everett R GS
3009 N. Ballas Ste 216
St Louis, MO 63131
314-567-5377
Levin, Marvin E IM
732 Fairfield Lake Drive
Chesterfield, MO 63017
314-432-6688
Levine, Laurence A OTO
2730 Highway 94S
St. Charles, MO 63303
Levine, Richard S DR
615 S. New Ballas Rd.
St. Louis, MO 63141
314-569-6031
Levitt, Joseph IM
8011 Clayton Road #100
St. Louis, MO 63117
314-362-2927
Levitt, Robert G DR
13134 Thornhill Drive
St. Louis, MO 63131
Levy, Jerome F GS
4989 Barnes Hosp Plaza
Suite 17308
St Louis, MO 63110
314-367-9400
Levy, Morton A IM
522 N. New Ballas #371
St. Louis, MO 63141
314-569-0160
Lewin, W. Howard OPH
818 Olive St Suite 450
St Louis, MO 63101
314-421-1749

Lewis, J. Eugene PDS
625 S. Skinker Apt. 903
St. Louis, MO 63105
Lewis, Lawrence M IM
1325 S. Grand
St. Louis, MO 63104
314-771-3065
Lewis, Robert D OPH
9187 Arrow Dr.
St. Louis, MO 63123
314-842-0582
LeBlanc, Leo J CRS
8038 Davis Dr.
St Louis, MO 63105
Liao, Kun T PTH
11636 Administration Dr
St Louis, MO 63146
314-567-3905
Lieb, Francis X PD
900 Cottage Grove
Bloomfield, CT 06152
Lieberman, David M IM
4989 Barnes Hosp Plaza
St Louis, MO 63110
314-361-5300
Liebhaber, Harvey IM
456 N. New Ballas #228
St Louis, MO 63141
314-991-1766
Lilly, Douglas R NM
621 S New Ballas Rd #419
St Louis, MO 63141
314-432-3456
Lim, Il T AN
1212 Lake Ridge Ct.
Oakville, IL 61832
Lim, Piemsak OBG
3478 Bridgeland Suite #4
Bridgeton, MO 63044
314-291-3770
Lima, Jose A OTO
10004 Kennerly Rd.
St. Louis, MO 63128
314-843-8400
Lin, Hsiu-San TR
510 S. Kingshighway
St. Louis, MO 63110
314-362-7034
Link, Alexander J OR
7215 Maryland
St Louis, MO 63130
314-432-5284
Linn, Richard M ORS
4421 Pershing Ave.
St. Louis, MO 63108
314-721-7575
Lipschitz, Ervin P
777 S New Ballas Rd
St Louis, MO 63141
314-872-7646
Lipsitz, Ellis S IM
220 Indian Key Lane
Naples, FL 33961
Lischwe, Daniel H FP
12255 DePaul Drive
Suite 600
Bridgeton, MO 63044
314-291-1074
Liss, Jay L P
763 South New Ballas Rd
#350
St Louis, MO 63141
314-569-0212
Litzow, Peter L R
520 Locust Ct.
Webster Groves, MO 63119
Livingston, Don G PD
15274 Manchester
Ballwin, MO 63011
314-527-6960
Loeb, Virgil IM
4989 Barnes Hosp Plaza
#3103
St Louis, MO 63110
314-362-7253
Loeffel, Ellen S GYN
3013 Hawthorne
St Louis, MO 63104
Logan, Samuel E PS
4949 Barnes Hospital Plaza
Suite 17424
St. Louis, MO 63110
314-362-7388
Logan-Morrison, Beverly A IM
8515 Delmar Blvd. #220 W
St. Louis, MO 63132
314-997-6154
Logie, Macdonald B R
2639 Miami St.
St. Louis, MO 63118
Lohr, Robt W R
236 Conway Hill Rd
St Louis, MO 63141
Loitman, Bernard S R
10 Washington Terr
St Louis, MO 63112
314-621-3378

---

*Doctor of osteopathy.

Lombardo, Joseph A RTH
11636 Administration Dr.
St. Louis, MO 63146
314-567-3905

Londe, Alan M GS
1040 N. Mason Rd. #121
St Louis, MO 63141
314-434-2518

Londe, Sol RD
2855 Roscamare Rd.
Bel Air, CA 90024

London, Stanley L GS
456 N New Ballas Rd
St Louis, MO 63141
314-569-0131

Lonergan, Warren M IM
1507 Mallard Landing Court
Chesterfield, MO 63017
314-361-1167

Long, Frank B OBG
1034 S. Brentwood Blvd.
St. Louis, MO 63117
314-725-9300

Lonsway, Maurice J Jr. RD
8025 Dale Ave
St Louis, MO 63117
314-644-2566

Lopez, Marvin J GS
Box 8109 4960 Audubon
St. Louis, MO 63110

Lord, Richard E ORS
621 S. New Ballas #50
St Louis, MO 63141
314-966-0111

Lottes, J. Otto ORS
2646 Michigan
St Louis, MO 63118

Lowenstein, Paul S GS
18 S Kingshighway Blvd
St Louis, MO 63108

Loynd, Robt C OTO
950 Francis Pl #309
St. Louis, MO 63105
314-727-3070

LoPiccolo, Vincent J Jr. RD
2821 N Ballas Rd #220
St Louis, MO 63131
314-567-4806

Lubowitz, Herbert IM
8515 Delmar
St. Louis, MO 63124
314-991-1766

Lucas, Thomas G R
9415 Sappington Est. Dr.
St. Louis, MO 63127

Ludwig, Mark A GS
1040 N. Mason #121
St. Louis, MO 63141
314-434-2518

Luechtefeld, Frank ORS
12255 DePaul Dr
Bridgeton, MO 63044
314-739-7654

Lugo, Saml GS
2900 Lemay Ferry Rd #200
St Louis, MO 63125
314-487-3775

Luh, Andrew M ORS
4110 Von Talge Rd
St Louis, MO 63128
314-894-2404

Luke, Robert A IM
660 S. Euclid Ave.
St. Louis, MO 63110
314-362-7462

Lund, Herluf G U
10004 Kennerly Rd.
St. Louis, MO 63128
314-843-0740

Lund, Robert H Jr. D
1034 S. Brentwood
St. Louis, MO 63117
314-727-2011

Luther, George A ORS
533 Couch Ave.
Suite 220
St Louis, MO 63122
314-966-0111

Lyles, Thomas O U
11125 Ram Lane
St. Louis, MO 63146
314-367-8877

Lyman, Edward H OTO
950 Francis Pl #313
St Louis, MO 63105
314-727-3132

Lynxwiler, Chester R RDC
2560 S. Calle Cervantes
Green Valley, AZ 85614

Lyss, Carl A IM
456 N New Ballas Rd
St Louis, MO 63141
314-569-1090

Lyss, Stanley B RD
456 N New Ballas Rd
St Louis, MO 63141
314-872-8662

Lytle, Edwin L RM
648 Lilac Ave.
St. Louis, MO 63119
314-645-8662

Maas, Corey S OTO
1325 S. Grand
St. Louis, MO 63112
314-577-8884

Machefsky, Sidney D R
725 Swarthmore Lane
St. Louis, MO 63130
314-725-3444

Machek, Otakar RM
6744 Clayton Rd #316
St Louis, MO 63117
314-645-6606

Mackey, Richard L U
533 Couch Suite 181
St. Louis, MO 63122
314-821-0000

Macleod, Angus IM
3555 Sunset Office Dr
St Louis, MO 63127
314-821-3900

Macnish, James M U
229 N. Bompart
St Louis, MO 63119

MacDonald, Robt R Jr. DR
621 S New Ballas Rd #23
St Louis, MO 63141
314-569-6031

MacDonald, Wm C IM
6744 Clayton Rd
St Louis, MO 63117
314-645-8333

Maddipati, Sreedezi AN
1325 South Grand
St Louis, MO 63104
314-771-7600

Madrid, Dominador O GS
2637 Keokuk Bldg. D
St Louis, MO 63118
314-892-2066

Magee, W. Edwin IM
835 South 8th Street #1A
St Louis, MO 63164
314-982-3120

Mahe, Geo A IM
820 S. McKnight
St Louis, MO 63124
314-727-5336

Mainini, Stephen E IM
1415 Barger Place
St. Louis, MO 63117

Maitz, Carlos A OBG
500 Northwest Plaza #425
St. Ann, MO 63074
314-291-2614

Majors, Patrick F IM
950 Francis
St. Louis, MO 63105
314-863-7766

Malik, Sarfraz A GE
6434 Chippewa
St Louis, MO 63109
314-351-3494

Malmberg, Virgil L R
3648 Terrace Ln
Granite City, IL 62040
314-567-5000

Maloney, Robt M U
16 Hampton Village Plz #232
St. Louis, MO 63109
314-351-4433

Manarsala, Antonio Q FR
1723 Jeffco Blvd P O Box 388
Arnold, MO 63010
314-296-4422

Manion, Maria E CHP
522 N New Ballas Rd
Suite 382
St Louis, MO 63141
314-567-5280

Mannis, Charles I ORS
522 N New Ballas Rd #199
St Louis, MO 63141
314-432-2323

Manske, Paul R ORS
One Barnes Hosp Plaza #11300
St. Louis, MO 63110
314-362-6548

Mantese, Vito A RUD
4523 Old Baumgartner
St. Louis, MO 63129
314-577-8000

Mantovani, John F PD
621 S. New Ballas Rd. #6006
St. Louis, MO 63141

Maravilla, Levy M GP
4211 Bayless Ave
St Louis, MO 63123
314-638-2448

Marbarger, John R Jr. CDS
621 S. New Ballas Rd. #6017
St. Louis, MO 63141
314-362-7260

Marchosky, J. Alex NS
224 S. Woods Mill Rd.
Suite 610
Chesterfield, MO 63017
314-367-8787

Marcus, Morris D D
8227 Balson
St. Louis, MO 63132

Margolis, David M GE
11155 Dunn Rd. #308E
St. Louis, MO 63136
314-355-4010

Margolis, Robert R N
11155 Dunn Rd.
St. Louis, MO 63136
314-355-3355

Marre, Joyce E OBG
1245 Graham Road Ste 308
Florissant, MO 63031
314-838-1171

Marsh, Jeffrey L PS
400 S. Kingshighway
St Louis, MO 63110
314-362-7390

Marshall, Jay R II IM
224 S. Woods Mill Rd.
Chesterfield, MO 63017
314-878-6260

Marshall, William G Jr. GS
2026 Clubhouse Road
Lakeland, FL 33813

Martin, Danl J OBG
621 S. New Balals Rd. #207
St. Louis, MO 63141
314-577-8850

Martin, David S R
14603 Big Timber
Chesterfield, MO 63017
314-532-9294

Martin, Jeffrey W ORS
922 Delvin Dr.
St. Louis, MO 63141
314-298-7057

Martin, Scott A PTH
615 S. New Ballas Rd.
St. Louis, MO 63141

Martz, John C RD
P. O. Box 26604
St Louis, MO 63122

Marushack, Michael M ORS
12379 "I" Cross Creek Cove
St. Louis, MO 63141
314-542-9263

Mass, Joan H IM
7366 Princeton
St. Louis, MO 63130
314-837-0505

Massie, Edward CD
Suite 16413
Barnes Hospital Plaza
St. Louis, MO 63110

Masters, Wm H OBG
24 S. Kingshighway Blvd.
St Louis, MO 63108
314-361-2377

Mathew, Ruby OBG
224 S. Woodsmill Rd. #560
Chesterfield, MO 63017
314-878-2233

Matsuba, Howard M ENT
3943 Veselich Ave.
Los Angeles, CA 90039

Matthews, John G IM
6405 Devonshire
St Louis, MO 63109
314-781-3886

Maughs, Sydney B R
33 Berry Road Park
St Louis, MO 63122
314-721-8242

Maupin, Kathy C OBG
1245 Graham Rd.
Florissant, MO 63033
314-821-5077

Maves, Michael D OTO
1325 South Grand Blvd.
St. Louis, MO 63104
314-577-8887

Maxson, Katherine A OBG
224 S. Woods Mill Rd. #530
Chesterfield, MO 63017
314-851-2929

Mayer, Robt A IM
3009 N. Ballas Rd.
Suite #108
St Louis, MO 63131
314-569-3990

Mayes, Ben R DR
12743 Conway Lake
St. Louis, MO 63141
314-434-6793

Maylack, Fallon H ORS
12255 DePaul Drive Ste 250
Bridgeton, MO 63044
314-739-7654

Mayuga, Edgardo G AN
12474 S. Forty Dr.
St. Louis, MO 63141
314-525-1969

McAdam, C. Rush FR
3928 Canterbury
St Louis, MO 63121
314-381-0477

---

*Doctor of osteopathy.

McAlister, Wm H R
510 S Kingshighway
St. Louis, MO 63110
314-454-6000
McBride, Lawrence R TS
1325 S. Grand Blvd
St. Louis, MO 63104
314-577-8359
McCadden, Michael E D
621 S. New Ballas Rd.
St. Louis, MO 63141
314-567-5711
McCall, Edwin L US
3751 Cedaridge Rd.
Kalamazoo, MI 49008
McCarthy, Christopher IM
9701 Landmark Parkway Dr.
Suite 210
St. Louis, MO 63127
314-842-5211
McClennan, Bruce L DR
510 South Kingshighway
St. Louis, MO 63110
314-362-1053
McCool, James F IM
3915 Watson Rd
St Louis, MO 63109
314-644-7100
McCown, Allan H R
2639 Miami Luthern Med Ctr.
Dept Radiology
St. Louis, MO 63118
314-727-0012
McGinnis, Wm F OBG
224 So. Woods Mill Rd
Suite 450
Chesterfield, MO 63017
314-434-2454
McGraw, Daniel J GS
5817 Nina Place #2E
St. Louis, MO 63112
314-725-1918
McGuire, Daniel J ORS
4949 Barnes Hosp
Ste 11300 W. Pavilion
St. Louis, MO 63146
314-362-4080
McKinney, Joe K P
777 S New Ballas Rd #234E
St Louis, MO 63141
314-569-2266
McKinney, John W OTO
3009 N. Ballas Rd. #228
St. Louis, MO 63131
314-394-2044
McLaren, A. Lesley FP
428 James McDonnell
Hazelwood, MO 63042
314-895-2811
McLear, Patrick W OTO
1017 Trelane
St. Louis, MO 63110
314-362-7552
McMullin, Forbes A ORS
12615 Old Tesson Road
St Louis, MO 63128
314-849-0311
McNalley, Michael OBG
2425 Fairroyal
St. Louis, MO 63133
314-821-1315
McNamara, John J R
6744 Clayton Rd.
St. Louis, MO 63117
314-645-2838
Meador, James R GS
36 Oak Park Drive
St Louis, MO 63141
Meadows, C. Douglas OM
777 S New Ballas Rd #119W
St Louis, MO 63141
314-567-6581
Medler, John F OBG
621 S. New Ballas #4017
St Louis, MO 63141
314-872-9192
Medler, P. Louis D
621 S. New Ballas Rd. #4017
St Louis, MO 63141
314-567-1291
Mehan, Donald J U
1035 Bellevue #406
St Louis, MO 63117
314-644-6767
Mehra, Pavi IM
4590 S. Lindbergh
St. Louis, MO 63127
314-843-3454
Mehra, Usha OBG
4590 S. Lindbergh
St. Louis, MO 63127
314-843-3454
Meinberg, William H OPH
15515 Lassen St.
Mission Hills, CA 91324
Meiners, David J GS
386 Conway Lake Dr.
St. Louis, MO 63141
314-771-7600

Meiners, Paul N GS
621 S. New Ballas Rd. #521
St. Louis, MO 63141
314-993-2930
Meiners, Theodore M OBG
224 S. Woods Mill Rd.
Chesterfield, MO 63017
314-576-0930
Mell, Roger L ORS
224 S. Woods Mill Road
Suite 255
Chesterfield, MO 63017
314-434-3240
Melson, G. Leland DR
510 S Kingshighway
St Louis, MO 63110
314-362-1053
Mendelsohn, George E NS
224 S. Woods Mill Rd.
Suite 610
Chesterfield, MO 63017
314-367-8787
Mendelsohn, Robt S IM
522 N. New Ballas #149
St Louis, MO 63141
314-567-1902
Mendelson, David F N
141 N Meramec Ave #317
St Louis, MO 63105
314-726-3202
Mendonsa, Lawrence E OBG
138 Ridgecrest Drive
Chesterfield, MO 63017
Merenda, Frank J ORS
621 S. New Ballas Rd. #5015
St. Louis, MO 63141
314-567-5850
Merenda, James T ORS
1465 S. Grand
St. Louis, MO 63104
314-577-5646
Merenda, Sam J R
1215 Kings Glen Court
St Louis, MO 63131
Merrims, Theodore OBG
8631 Delmar Blvd
St Louis, MO 63124
314-993-5563
Merritt, Burch A PD
12937 Timmor Ct
St Louis, MO 63131
314-383-2953
Mestres, Hugh M PD
10004 Kennerly Rd. #195B
St Louis, MO 63128
314-849-5010
Meyer, Harry E P
621 S New Ballas Rd.
St. Louis, MO 63141
314-997-3443
Meyer, Jay P
763 S. New Ballas Rd
St Louis, MO 63141
314-569-0212
Meyer, John S CLP
232 S. Woods Mill Rd.
Chesterfield, MO 63017
314-851-2983
Meyer, Melvin E OPH
6651 Chippewa
St Louis, MO 63109
314-645-4100
Meyer, Robert C GS
1035 Bellevue Suite 211
St. Louis, MO 63117
314-644-6300
Meyer, Wayne W GS
12255 DePaul Dr.
Suite 755
Bridgeton, MO 63044
314-739-6060
Meyerrose, Gary E IM
15402 Manchester Rd.
Ellisville, MO 63011
314-962-2824
Meyers, Elsie F AN
6364 Alexander Dr
St. Louis, MO 63105
Meyers, John B IM
120 North Forsyth Blvd.
St. Louis, MO 63105
Meyers, Robt W P
4524 Forest Park Blvd
St Louis, MO 63108
314-367-8424
Michael, Vernon E GS
45 Huntleigh Woods
St Louis, MO 63131
Michaelree, John F FP
921 La Cherie
Manchester, MO 63011
Middleton, Jerry N OBG
224 S Woods Mill Road
Suite 750
Chesterfield, MO 63017
314-576-9797
Middleton, Mary A DR
5701 Columbia Ave.
St. Louis, MO 63139
314-645-5065

Milder, Barry D OPH
2821 N Ballas Rd. #120
St. Louis, MO 63131
314-432-7010
Milder, Benj OPH
2821 North Ballas Suite 120
St Louis, MO 63131
314-432-7010
Miles, Paul W OPH
208 Ambridge Court
Chesterfield, MO 63017
Mill, Wm B JR TR
1601 Featherstone Dr.
St. Louis, MO 63131
Millangue, Consolacion IM
8059 Watson Rd
St. Louis, MO 63119
314-961-8207
Miller, Charles W D
10004 Kennerly Rd.
St. Louis, MO 63128
Miller, Chas Jr. IM
12166 Big Bend Blvd
St. Louis, MO 63122
314-821-9150
Miller, Edward J IM
522 N New Ballas Ste 349
St Louis, MO 63141
314-567-3113
Miller, Geoffrey W R
60 Berkshire
St Louis, MO 63117
314-441-6730
Miller, James E OPH
621 S. New Ballas Rd. #5007
St Louis, MO 63141
314-567-0644
Miller, Jule P P
4524 Forest Park Blvd #204
St Louis, MO 63108
314-367-2660
Miller, Paul E IM
St. Anthony's Med Ctr EMGR
10010 Kennerly Rd.
St. Louis, MO 63128
314-525-1900
Miller, Robt N AN
621 S. New Ballas Road
St. Louis, MO 63141
314-569-6987
Miller, Wm V CLP
4050 Lindell Blvd
St Louis, MO 63108
314-658-2131
Milstead, Kenneth L Jr. AN
4817 Dorset Ave
Chevy Chase, MD 20015
301-652-8713
Milster, Clyde R OPH
7443 Hibbard Lane
St Louis, MO 63123
Minana, Mitchell F AN
883 Woodpoint Dr. Apt I
Chesterfield, MO 63017
314-536-4029
Mirbaha, Mitchell M OPS
4110 Von Talge Rd #102
St Louis, MO 63128
314-894-2404
Mirowitz, Scott A DR
32 Morwood Lane
St. Louis, MO 63141
314-569-3595
Mischnick, Carol R PS
10004 Kennerly Rd. #200
St. Louis, MO 63128
314-567-9096
Mishkin, Marvin R OPS
522 N New Ballas Rd #199
St Louis, MO 63141
314-432-2323
Miskovsky, Emil F IM
12255 DePaul Dr. #865
Bridgeton, MO 63044
Missey, Wilburn C IM
2439 Baxton Way
Chesterfield, MO 63017
Mistry, Tehmton S OBG
3009 N. Ballas Rd. Ste 244
St Louis, MO 63131
314-727-3439
Modin, Jeffrey J CHN
555 N New Ballas Rd.
Suite 100
St. Louis, MO 63141
314-569-0720
Mohrman, Raymond F IM
12255 DePaul Dr.
St. Louis, MO 63044
314-291-8824
Mohs, Frank R IM
12303 Depaul Dr.
Bridgeton, MO 63044
314-344-6264
Molden, C. Scott IM
3009 N. Ballas Rd. #100
St Louis, MO 63131
314-432-1111

---

*Doctor of osteopathy.

Molden, Chas A FP
3472 Bridgeland Dr. #A
Bridgeton, MO 63044
314-291-8686
Mollman, H. Dennis NS
224 S. Woods Mill Suite 610
Chesterfield, MO 63017
314-878-2888
Monafo, Wm W GS
4960 Audubon Ave.
St. Louis, MO 63110
314-362-5298
Montani, Chas FP
2334 Macklind
St Louis, MO 63110
314-771-4082
Monteleone, James A PD
1465 S. Grand
St. Louis, MO 63104
314-577-5639
Monteleone, Patricia L PD
1465 S. Grand
St. Louis, MO 63104
314-577-5611
Monterubio, Fred P Jr. OBG
515 Timberwyck Dr.
St. Louis, MO 63131
314-429-1900
Montes, Arturo C FP
4585 Washington
Suite C 4
Florissant, MO 63033
314-921-4550
Montes De Oca, Julio IM
950 Francis Pl
St. Louis, MO 63105
314-726-2828
Montgomery, Austin F IM
222 So. Woods Mill Rd.
Suite 630N
Chesterfield, MO 63017
Moolsintong, Pornchai R
447 Twin Creek Rd.
St. Louis, MO 63141
314-768-8250
Moore, Harry G Jr. CHP
141 N Meramec #107
St Louis, MO 63105
314-726-2770
Moore, Walter L N
71 Wolfram Road
St. Charles, MO 63303
Mora, Alvaro OBG
1040 N. Mason Road
St. Louis, MO 63141
314-434-6020
Moran, Christopher J DR
3015 N. Ballas Rd. Ste. 131
St. Louis, MO 63131
314-432-5284
Moran, Thos M P
889 S. Brentwood #203
St Louis, MO 63105
314-727-9541
Morey, Kirk P OPH
3655 Vista Ave.
St. Louis, MO 63110
314-962-9068
Morgan, Harry C ORS
4989 Barnes Hosp Plaza
St Louis, MO 63110
314-361-2253
Morgan, Stephan S OPH
16 Hampton Village Plaza
St Louis, MO 63109
314-351-5330
Morgan, Willy J C U
P. O. Box 14228
St. Louis, MO 63178
618-874-6792
Moriccni, William J IM
3535 S. Jefferson Ste 119
St. Louis, MO 63118
314-664-4202
Moritz, Gerald OTO
8020 Daytona Dr.
St. Louis, MO 63105
314-291-8787
Morley, Mary A OBG
224 S. Woods Mill Rd. #530
Chesterfield, MO 63017
314-851-2929
Morris, Alan H ORS
522 N New Ballas Rd #199
St Louis, MO 63141
314-432-2323
Morris, R. William IM
10004 Kennerly Rd. Ste 395B
St. Louis, MO 63128
314-961-0370
Morrison, Arlen E IM
432 Foxbrook Dr.
St. Louis, MO 63141
314-678-2462
Mortensen, Frede IM
3555 Sunset Office Dr.
St Louis, MO 63127
Morton, David J IM
6400 Clayton Rd. Suite 212
St. Louis, MO 63117
314-645-6450
Moses, Robert A OPH
7157 Lindell Blvd.
St. Louis, MO 63130
Mosley, Julian C GS
3737 N Kingshighway #206
St Louis, MO 63115
314-383-0133
Motchan, Dennis G IM
3394 McKelvey Rd.
Bridgeton, MO 63044
291-341-0000
Motier, Thomas H PD
16 Hampton Village
St. Louis, MO 63109
314-351-2004
Mowrey, Wm O FP
7071 Lindell Blvd.
St Louis, MO 63130
Muckerman, Richard I OBG
1314 Log Cabin Lane
St. Louis, MO 63124
314-997-6080
Muckerman, Richard C II OBG
621 S. New Ballas Rd.
Suite 625
St. Louis, MO 63141
314-567-5515
Mueller, Clarence E IM
2821 N. Ballas C-15
St Louis, MO 63131
314-672-7332
Mueller, Howard A IM
13 Walker Dr.
Bloomington, IL 61701
309-662-0603
Mueller, John J PTH
7300 Christopher Dr.
St. Louis, MO 63129
314-646-9031
Mueller, Jos A FP
2968 Spring Water Dr.
St Louis, MO 63129
Mueller, Morris A IM
4917 Ravenswood Apt 111
San Antonio, TX 78227
Mueller, Robt J P
40 Huntleigh Woods
St Louis, MO 63131
314-351-5509
Mueller, Wilbur K R
9645 Big Bend Blvd
St Louis, MO 63122
Muhammud, Faquir IM
11155 Dunn Rd
Suite 210 E
St Louis, MO 63136
314-355-6700
Mullarky, Wilbur A IM
704 Tomlinson Terrace
Lake Mary, FL 32746
Mulligan, Michael E FP
653 S. New Ballas #3C
St. Louis, MO 63141
816-569-6060
Mullins, John E IM
222 Woods Mill Rd. South
Suite 630
Chesterfield, MO 63017
314-878-7004
Murdock, Nathaniel OBG
4949 Barnes Hosp Pla #16310W
St Louis, MO 63110
361-488-0000
Murphy, Daniel J IM
3394 McKelvey Road
Bridgeton, MO 63044
314-739-5070
Murphy, J. Peter Jr. CD
3015 North Ballas Road
St. Louis, MO 63131
314-569-5287
Murphy, Wm A Jr. DR
510 S Kingshighway
St Louis, MO 63110
314-362-2916
Muschany, Norman K OBG
224 S. Woods Mill #720
Chesterfield, MO 63017
314-576-6166
Mustoe, Thomas A PS
4949 Barnes Hosp Plaza
St. Louis, MO 63110
314-362-7388
Myers, Gary H N
224 S. Woods Mill Rd. #210
Chesterfield, MO 63017
Myers, Ivan T OBG
3009 N. Ballas Rd. Ste 244
St. Louis, MO 63131
314-727-3439
Nahm, Chung C IM
3535 S. Jefferson Ave #101
St Louis, MO 63118
314-664-2600
Nakra, Bharat Raj P
1221 S. Grand
St. Louis, MO 63104
314-577-8726
Nakra, Rashmi R P
4949 Barnes Hosp Plaza 16428
St. Louis, MO 63110
314-367-4500
Narayan, Dilip L GE
224 S. Woods Mill Rd. #560
Chesterfield, MO 63017
314-878-8758
Narkiewicz, Lawrence S IM
533 Couch Suite G20
St Louis, MO 63122
314-965-5868
Naseer, Riaz A N
1338 Topping Rd.
St Louis, MO 63131
314-837-6700
Nash, Helen F PD
1441 N Grand
St Louis, MO 63106
314-535-8353
Nash, Homer E Jr. PD
3737 N Kingshighway
Suite 101
St. Louis, MO 63115
314-261-5250
Naumovich, Anna D IM
5624 South Grand
St. Louis, MO 63111
314-818-8347
Naunheim, Keith S TS
1325 S. Grand Blvd.
St. Louis, MO 63104
314-577-8360
Near, David M GS
1125 Graham Road
Florissant, MO 63031
314-838-5700
Nelson, J. Roger CD
533 Couch Suite G20
St Louis, MO 63122
314-965-5868
Nelson, Susan J PD
8515 Delmar #217
Clayton, MO 63124
314-721-2262
Nemec, Edward S R
2416 White Stable Rd.
St. Louis, MO 63131
Nepute, James A R
615 S. New Ballas Rd.
St. Louis, MO 63141
314-569-6031
Neuman, Neal U
456 N New Ballas Rd
St. Louis, MO 63141
314-567-6071
Newman, Matthew OPH
1034 S. Brentwood Suite 550
St. Louis, MO 63117
314-863-8866
Newport, Gerald OBG
77 Westport Plaza
Suite 265
St. Louis, MO 63141
314-878-7333
Newton, Gordon IM
141 N Meramec Suite 202
St Louis, MO 63105
314-725-8580
Nicholas, Stephen P IM
6400 Clayton Rd. Suite 216
St. Louis, MO 63117
314-645-2810
Nickel, James F IM
621 S New Ballas Rd #419
St Louis, MO 63141
314-432-3456
Nicolai, Chas H U
3009 N. Ballas Rd.
Suite 215
St Louis, MO 63131
314-432-4575
Niedermeyer, Geo J OBG
4107 Union Rd.
St. Louis, MO 63129
314-849-5575
Nielsen, Carl H AN
660 S. Euclid Ave. Box 8054
St. Louis, MO 63110
314-962-2730
Niesen, Anna R IM
411 Gabriel Dr.
St. Louis, MO 63122
314-781-8405
Niesen, Frank J GS
6500 Chippewa #202
St Louis, MO 63109
314-352-5193
Niesen, Thomas E GS
224 S. Woods Mill #640
Chesterfield, MO 63017
314-434-1211
Nigh, Chas A GS
3915 Watson Rd
St Louis, MO 63109
314-644-7100
Nishi, Toshio PTH
3071 Andover Dr.
St. Louis, MO 63121
Nolan, Chas J R
312 Chateaugay
Chesterfield, MO 63017

---

*Doctor of osteopathy.

Noller, Henry W IM
1311 Medinah Dr. SW
Ft. Myers, FL 33919

Nomura, Roy M PTH
13276 Manchester Rd.
St Louis, MO 63131
314-822-0990

Nordlicht, Scott M IM
4989 Barnes Hosp Plaza #4104
St. Louis, MO 63110
314-367-3734

Norland, Chas C IM
3009 N. Ballas Rd. #100
St Louis, MO 63131
314-432-1111

Nouhan, Joseph G Jr. OBG
621 S. New Ballas Rd. #7018
St. Louis, MO 63141
314-432-3723

Nouri, Hassan OBG
12622 Alswell Lane
St Louis, MO 63128
314-842-4000

Novack, Mark A IM
224 S. Woods Mill Rd. #410
Chesterfield, MO 63017
314-878-7220

Nuetzel, John A IM
13309 Conway Road
St. Louis, MO 63141

Nunez, Maria A PD
2821 Ballas Rd Ste 135
St Louis, MO 63131
314-872-3236

Nwaobasi, Sam GS
11277 Ashcroft Lane
St. Louis, MO 63136
314-355-3487

Nyazee, Muhammad A IM
7520 Natural Bridge
St. Louis, MO 63121
314-389-3333

O'Brien, Edward J Jr. R
6150 Oakland Ave
St Louis, MO 63139
314-645-8510

O'Brien, Robert M ORS
950 Francis Place
St Louis, MO 63105
314-862-2012

O'Connell, Timothy PS
621 S. New Ballas Rd. #6003
St. Louis, MO 63141
314-991-2151

O'Connor, Robert J FP
11133 Dunn Rd. B114
St. Louis, MO 63136
314-355-2300

O'Connor, Timothy P GS
5660 Kingsbury #108
St. Louis, MO 63112

O'Donnell, Francis E OPH
6125 Clayton Ave.
St. Louis, MO 63139
314-531-4101

O'Keefe, Jos D OBG
533 Couch Ave.
St. Louis, MO 63122
314-965-3213

O'Neal, Lawrence W GS
9975 Holliston Ct.
St. Louis, MO 63124
314-569-6440

O'Neal, Patricia L P
4989 Barnes Hosp Plaza 16428
St Louis, MO 63110
314-367-4500

O'Neil, Jerome H Jr. PD
6651 Chippewa #224
St. Louis, MO 63109
314-645-6944

O'Reilly, D. Elliott ORS
9054 Clayton Road
St. Louis, MO 63117

O'Sullivan, Danl F GS
10007 Kennerly Rd
Suite A
St Louis, MO 63128
314-849-2727

Oakley, Margaret M AN
407 Steeple Chase
St Louis, MO 63131
314-965-1567

Oetter, Donald L A
6744 Clayton Rd #220
St Louis, MO 63117
314-434-7445

Oglesby, Richard B OPH
621 S New Ballas Rd #5006
St Louis, MO 63141
314-432-5478

Ohlms, David L P
11745 Olive St. Rd. #205
St Louis, MO 63141
314-567-5011

Ojascastro, Alejandro C FP
3654 S. Grand Blvd.
St. Louis, MO 63118
314-773-1585

Okun, Edward OPH
4949 Barnes Hosp Plaza 17413
St Louis, MO 63110
314-367-1181

Olk, R. Joseph OPH
4949 Barnes Hosp Pl
Suite 17413
St. Louis, MO 63110
314-367-1181

Omell, Gary H DR
467 Killearn Lane
St. Louis, MO 63141
314-851-2932

Ong, Eng L GS
1276 White Rd.
Chesterfield, MO 63017

Ong, Ofelia S OBG
1276 White Rd.
Chesterfield, MO 63017
314-367-0711

Onken, Henry D PS
1034 S. Brentwood #750
St Louis, MO 63117
314-727-8484

Oppenheimer, Henry E IM
911 S. Brentwood Blvd. #101
St. Louis, MO 63105
314-725-9656

Orgel, M. Norman IM
100 N. Euclid Ave. #1000
St Louis, MO 63108
314-367-3900

Orgel, Michael IM
100 N. Euclid Ave.
St Louis, MO 63108
314-367-3900

Ortbals, David W IM
224 South Woods Mill Rd.
Suite 620
Chesterfield, MO 63017
314-434-8001

Ortiquero, Leopoldo M FP
10577 Windswept Dr
St Louis, MO 63128
314-892-2066

Ortmeyer, Leroy F IM
2623 Telegraph Rd.
St Louis, MO 63125
314-487-6910

Ostapowicz, Frank OBG
3 Hillvale Dr.
St. Louis, MO 63105

Ostapowicz, Tamara L OBG
1035 Bellevue Ave. #208
St. Louis, MO 63117
314-644-6262

Ott, F. Thomas OPH
#22 Algonquin Lane
St. Louis, MO 63119
314-863-8866

Ott, Harold J OBG
1034 S. Brentwood Blvd. #910
St Louis, MO 63117
314-721-7900

Ott, Wm J OBG
365 W. Point Ct.
St Louis, MO 63130
314-768-8000

Owen, James W IM
2507 Glynnwood Lane
Bartlesville, OK 74006

Owen, Robt F IM
12 Hacienda Dr
St Louis, MO 63124
314-837-3720

Owens, Wm D OS
4989 Barnes Hospital Plaza
St Louis, MO 63110
314-362-6973

Ozmat, Orhan M R
4 Ladue Crest Lane
St Louis, MO 63124

Pack, Keith E P
One Barnes Hosp Plaza
St. Louis, MO 63110
314-362-5000

Packman, Paul P
1034 S. Brentwood
Suite 1180
St Louis, MO 63117
314-727-1666

Packman, Robt C IM
4652 Maryland Ave.
St. Louis, MO 63108
314-367-3113

Padilla, Teresita C OBG
224 S. Woods Mill Rd. #430
Chesterfield, MO 63017
314-434-6760

Paez, Mauro A CLP
11636 Administration Dr
St Louis, MO 63141
314-567-3715

Paine, Robert IM
222 S. Woods Mill Rd. #510
Chesterfield, MO 63107
314-434-8016

Paletta, Christian E PS
215 W. Cedar Ave.
St. Louis, MO 63119
314-968-0104

Paletta, Francis X Sr. PS
77 Westport Plaza #260
St Louis, MO 63141

Paletta, Frank IM
1040 N. Mason Rd
St Louis, MO 63141
314-878-9970

Paletta, Theodore L IM
1040 N. Mason Rd
St Louis, MO 63141
314-878-9970

Paletta, Victor L IM
12762 Boenker
Bridgeton, MO 63044
314-291-1170

Palmer, Stephen M D
1035 Bellevue Ave. #509
St. Louis, MO 63117
314-644-0555

Pappalardo, Carlos PS
621 S New Ballas Rd #442
St Louis, MO 63141
314-567-5620

Pardo, Leopoldo P NS
12639 Old Tesson Rd.
St. Louis, MO 63128
314-849-4854

Pardo, Lourdes S PD
25 Black Oak Dr.
P. O. Box 8565
St. Louis, MO 63127
314-726-1100

Parikh, Sharad P GS
11637 W Florissant Ave.
Florissant, MO 63033
314-831-4200

Parikh, Smita S R
2300 Leland Ridge Walk
St. Louis, MO 63131
314-831-4200

Paris, Wm H FP
3472 Bridgeland Dr. #a
Bridgeton, MO 63044
314-291-8686

Parker, Thos W IM
7298 Greenway Dr
St Louis, MO 63130
314-863-7766

Parker, Wm D
7629 Cornell
St. Louis, MO 63130
314-725-1640

Parks, Charles GS
1040 N. Mason Rd. #121
St. Louis, MO 63141
314-569-0130

Parks, Deborah L IM
354 Calvert Ave.
St. Louis, MO 63119
314-367-3113

Parra, Raul O U
3635 Vista Ave. at Grand
P. O. Box 15250
St. Louis, MO 63110
314-577-8790

Parsons, Richard P U
224 S. Woods Mill Rd. #510
Chesterfield, MO 63017
314-434-3433

Partap, Prabha PTH
8 Dunleith
St Louis, MO 63131
314-993-6520

Parwatikar, Sadashiv D P
818 Olive St. #1500
St Louis, MO 63101
314-421-4137

Paskar, Larry D R
14337 Stablestone Court
Chesterfield, MO 63017

Passanante, Bartholomew M GS
15 King Lynn
St Louis, MO 63132

Patrick, Roman L PTH
13109 Fourposter Ct.
St. Louis, MO 63146
314-567-3905

Payne, Meredith C PS
1034 So Brentwood Blvd.
Suite 778
St Louis, MO 63117
314-727-1337

Pearlman, Alan L N
517 S Euclid Ave
St Louis, MO 63110
314-362-7172

Pearse, Carlton S OBG
224 S. Woods Mill Rd. #680
Chesterfield, MO 63017
314-367-0399

Pearson, William E OBG
12166 Big Bend #100
St. Louis, MO 63122
314-821-3500

Peden, Burnet W IM
35 N Central Ave #245
St. Louis, MO 63105
314-721-7210

Peden, Virginia H PD
7350 Drexel
St. Louis, MO 63130

---

*Doctor of osteopathy.

Pelican, George IM
621 S. New Ballas Rd. #674
St. Louis, MO 63141
314-569-2102
Penilla, Antonio R IM
12255 DePaul Dr.
Bridgeton, MO 63044
314-739-1060
Pennell, Richard C GS
621 S. New Ballas #521
St. Louis, MO 63141
Pennington, D. Glenn GS
1325 S. Grand Ave.
St. Louis, MO 63104
314-771-7600
Pennoyer, James OBG
117 Plant
St Louis, MO 63119
314-367-7100
Pentella, Karen J N
11155 Dunn Rd. #202N
St. Louis, MO 63136
314-355-3355
Pepper, Edward G R
6150 Oakland Ave
St Louis, MO 63139
314-648-8510
Pepper, Max P P
1320 S. Grand Blvd.
St Louis, MO 63104
314-664-9800
Pereira, MaryBeth IM
12824 Topping Acres
St. Louis, MO 63131
314-965-1208
Perez, Adamor R GS
4415 Vermillon Dr
St Louis, MO 63128
314-789-3313
Perez, Blanca M PTH
10010 Kennerly
St. Louis, MO 63128
314-991-1078
Perez, Carlos A R
4511 Forest Park #411
St Louis, MO 63108
314-362-3499
Perez, Jeannie O PD
12255 DePaul Dr. #280
Bridgeton, MO 63044
314-739-2207
Perez, Robert J IM
533 Couch Avenue #281
St. Louis, MO 63122
314-966-0500
Perez, Romeo J OBG
3009 N Ballas Rd.
St. Louis, MO 63131
314-872-3743
Perinetti, Enrique P U
11155 Dunn Rd. #109N
St. Louis, MO 63136
Perkins, David E DR
1034 S Brentwood #280
St Louis, MO 63117
314-727-0012
Pernoud, Flavius G Jr. OPH
1027 Bellevue #201
St Louis, MO 63117
314-644-6666
Pernoud, Flavius G III OPH
15 Huntleigh Manor
St. Louis, MO 63131
314-567-4224
Pernoud, Joan M OPH
15 Huntleigh Manor
St. Louis, MO 63131
314-353-0016
Pernoud, Michael F OPH
1027 Bellevue #201
St Louis, MO 63117
314-644-6666
Perry, Wm D IM
1034 S Brentwood Blvd
St Louis, MO 63117
314-721-0666
Peterson, Frederick D PD
8025 Dale Ave
St Louis, MO 63117
314-644-2566
Petkovich, Frank O ORS
224 S. Woods Mill Road
Chesterfield, MO 63017
314-434-6781
Petruska, Paul J IM
367 Conway Lake Dr.
St Louis, MO 63141
314-771-7600
Philip, Varkey E EM
525 Couch Ave
St. Louis, MO 63122
314-966-1528
Phillips, Abraham M PD
777 S New Ballas Rd
St Louis, MO 63141
314-567-9180
Phillips, Daniel N
3009 N. Ballas Rd. #209
St. Louis, MO 63131
314-567-3663
Phillips, John J ORS
12255 DePaul Dr. #250
Bridgeton, MO 63044
314-739-7654
Phillips, John G OTO
7807 Garden Ave.
St. Louis, MO 63119
314-962-1238
Phillips, Wm J IM
222 S. Woods Mill Rd. #310
Chesterfield, MO 63017
314-576-6700
Philpott, Gordon W GS
216 South Kingshighway
St Louis, MO 63110
314-454-7170
Phipatanakul, Supote OTO
220 W. Argonne - Ste. 200
St Louis, MO 63122
314-966-6656
Piccione, Leonard N FP
12244 DePaul #325
Bridgeton, MO 63044
314-291-7223
Pickens, Andrew T P
1027 Bellevue
St. Louis, MO 63117
314-781-7400
Picker, Selwyn NS
660 S. Euclid Box 8057
St. Louis, MO 63110
314-362-3566
Pignotti, Blase J OBG
621 S. New Ballas Rd.
#560 Tower A
St. Louis, MO 63141
314-993-6401
Pimentel, Esperanza M FP
2323 Chambers
St Louis, MO 63136
314-867-2736
Pimentel, Mauricio F FP
1731 Redman Ave.
St Louis, MO 63138
314-867-2736
Pineda, Hector O IM
4460 Chippewa
St Louis, MO 63116
314-481-8028
Piontek, Jerome G ORS
224 S. Woods Mill #770
Chesterfield, MO 63017
314-434-6785
Piper, August T IM
4460 Rosalie St.
St. Louis, MO 63115
Pitsinger, N. Bruce GS
232 S. Woods Mill Rd.
Chesterfield, MO 63017
314-878-0848
Pittman, C. Christopher DR
Dept of Rad Univ Hosp
1325 S. Grand
St. Louis, MO 63104
314-577-8025
Pittman, Gerald R PTH
11636 Lackland
St. Louis, MO 63146
Pittman, Susan PD
621 S. New Ballas Rd #4006B
St Louis, MO 63141
314-567-0016
Plax, Steven I PD
8025 Dale
St Louis, MO 63117
314-644-2566
Poger, Marshall E CLP
40 Hill-N-Dale
St. Louis, MO 63132
314-997-4968
Pohl, David L DR
6150 Oakland Ave. Dept Rad
St. Louis, MO 63139
314-577-8025
Pon, Marcelino FP
10727 Roxanna
St. Louis, MO 63128
314-677-5711
Ponnuru, Bhaskara M AN
1009 Amsterdam Drive
Ballwin, MO 63011
Ponstingl, Raana J IM
10010 Kennerly Rd.
St. Louis, MO 63128
314-525-1905
Popp, Dennis A IM
1817 Aston Way
Chesterfield, MO 63017
Porporis, Arthur A R
824 Renderer Dr
St Louis, MO 63122
314-361-7373
Portnoff, Lee S D
3009 N. Ballas Rd. Suite 240
St. Louis, MO 63131
314-993-2909
Post, Stephen L P
4524 Forest Park #201
St Louis, MO 63108
314-361-8333
Potashnick, Robert IM
564 Sarah Lane Apt 307
St. Louis, MO 63141
Potter, Reese H P
10 Wilshire Terr
St. Louis, MO 63119
314-961-4686
Potts, Dan E IM
222 S. Woods Mill Rd. #310
Chesterfield, MO 63017
314-576-6700
Powell, Charles B ORS
819 Locust
St. Louis, MO 63101
314-838-5700
Powell, John A D
1034 S. Brentwood Blvd. #960
St Louis, MO 63117
314-863-7080
Prelutsky, David J IM
3115 S. Grand Blvd. #504
St. Louis, MO 63118
314-776-4444
Prensky, Arthur L CHN
400 S. Kingshighway
St Louis, MO 63110
314-454-6084
Presnell, Cleitus A OTO
16751 Pheasant Ct. S.W.
Fort Myers, FL 33908
Price, Hilton I DR
3450 Bridgeland Dr. Suite C
Bridgeton, MO 63044
314-291-0340
Probst, Raymond E OBG
10345 Higway 66
St Louis, MO 63127
314-965-6033
Probstein, Jacob G GS
212 N Kingshighway #330
St. Louis, MO 63108
314-367-3822
Prophete, Yves R U
7601 Natural Bridge
St. Louis, MO 63121
314-381-3255
Proskey, Vincent J IM
522 N New Ballas Rd #349
St Louis, MO 63141
314-567-3113
Pruett, Burchard S OS
10321 Richview Dr
St Louis, MO 63127
Pruett, Don S GS
3009 N. Ballas Rd. #235
St. Louis, MO 63131
314-991-4567
Purcell, Harry K GS
911 S Brentwood Blvd #226
St Louis, MO 63105
314-725-4747
Purcell, John J Jr. OPH
6400 Clayton Rd #416
St Louis, MO 63117
314-647-2277
Puro, Edward A IM
11115 New Halls Ferry Rd
Florissant, MO 63033
314-838-0222
Qazi, Nasreen PTH
10010 Kennerly Rd.
St. Louis, MO 63128
314-842-5600
Quadir, Humayum IM
10004 Kennerly Rd
St Louis, MO 63128
314-843-3449
Quick, Richard T P
777 S. New Ballas Rd. #333W
St Louis, MO 63141
314-567-5185
Quinones, Frank S IM
533 Couch Ave.
Kirkwood, MO 63122
314-822-3122
Qureshi, Abdul R IM
10004 Kennerly Road
St Louis, MO 63128
314-843-3110
Racadio, Severo M FP
P. O. Box 1
1241 Jeffco
Arnold, MO 63010
314-296-5522
Rachlin, Maxwell OPH
42 Riovista Drive
St Louis, MO 63124
Rader, Edward S U
7744 Davis Dr.
St. Louis, MO 63105
314-727-7717
Radford, Diane M GS
3123 Park Hampton Court
St. Louis, MO 63139
314-577-8000

---

*Doctor of osteopathy.

*Radinsky, Stephen DR
12267 Winrock Dr.
St. Louis, MO 63141
314-434-5936
Rahman, Moududur OPH
911 S Brentwood #102
St Louis, MO 63105
314-725-7373
Rahman, Syed Shah IM
1839 Forest St. Parkway
Denver, CO 80220
Raichle, Marcus E N
710 Jamaica Ct
St Louis, MO 63122
314-362-2950
Rainey, Robt GS
9385 Page Blvd.
St Louis, MO 63114
314-428-8100
Raju, Padma I ON
1325 S. Grand
St. Louis, MO 63104
314-577-8815
Ramirez, Jose A IM
6420 Clayton Rd.
St. Louis, MO 63117
314-863-0938
Ramirez, Samuel G IM
7449 W. Florissant
St Louis, MO 63136
314-385-9111
Ramirez-Inawat, Rebecca C AN
415 Country Oak Dr.
Chesterfield, MO 63017
314-469-0120
Ramsey, Robt H IM
11115 New Halls Ferry Rd
#201
Florissant, MO 63033
314-921-2060
Randolph, Bernard C FP
3737 N Kingshighway #201
St Louis, MO 63115
314-383-1746
Rankin, Diane CHP
717 S. Central
St. Louis, MO 63105
Rao, Carlo GS
11639 W. Florissant
Florissant, MO 63033
314-921-6200
Rao, Sumati PTH
1111 Tamaron Place
St. Louis, MO 63131
314-771-7600
Rappold, Henry O OBG
500 Northwest Plaza #500
St Ann, MO 63074
314-291-0040
Ratana, Kenny DR
777 S. New Ballas Rd.
St. Louis, MO 63141
314-567-4350
Ratkin, Gary A HEM
4910 Forest Park #202
St Louis, MO 63108
314-361-7786
Raza, Syed A
2216 W. Main St.
Belleville, IL 62221
618-233-1100
Razzaq, A. IM
2118 Washington Ave.
Granite City, IL 62040
Reardon, Thos F IM
300 S. Grand
St Louis, MO 63103
314-658-5049
Redington, James C Jr. IM
1 Tuscany Park
St Louis, MO 63105
314-727-5336
Rednam, Krishnarao V OPH
224 S. Woods Mill Rd.,
Suite 400
Chesterfield, MO 63017
314-821-0500
Reed, Leslie G FP
10524 Seaton Place
St Louis, MO 63137
314-867-9935
Reese, Lester T D
522 N New Ballas Rd
St Louis, MO 63141
Reeves, Col., Glen I TR
32 TFS Clinic/SG
APO, NY 09292
Reh, Edward P Jr. IM
533 Couch
St. Louis, MO 63122
314-965-5868
Reh, Thos E R
6420 Clayton Rd
St Louis, MO 63117
314-768-8250
Reichert, Timothy J OTO
777 S. New Ballas Rd.
St. Louis, MO 63141
314-872-8338

Reinhard, Edward H IM
42 Frederick Lane
St. Louis, MO 63122
Reisler, David M N
224 So Woods Mill Rd.
Suite 550
Chesterfield, MO 63017
314-434-3414
Reiter, Federico B DR
11133 Dunn Rd
St Louis, MO 63136
Rejent, Anthony J PD
10004 Kennerly Rd.
Suite 195B
St Louis, MO 63128
314-849-5010
Rendleman, Geo F Jr. GS
818 Olive St #1023
St Louis, MO 63101
314-241-9261
Rennard, Marvin OBG
2821 N Ballas Rd Ste 25
St Louis, MO 63131
314-872-9206
Repp, Theodore J Jr. FP
81 Bellerive Acres
St. Louis, MO 63121
Revels, Harry III OPH
317 Medinah Lane
Lompoc, CA 93436
Reyes, Jose T AN
455 Steeplechase Lane
St Louis, MO 63131
314-525-1000
Reyes, Luis A GS
467 Jeffco
Arnold, MO 63010
314-296-1861
Reynolds, James A IM
224 S. Woods Mill Rd. #410
Chesterfield, MO 63017
314-878-7220
Reynolds, Robert B Sr. P
14377 Woodlake Dr.
Chesterfield, MO 63017
314-432-2298
Reynolds, Susan K FP
1000 Gravois Suite 70G
Grasso Plaza
St. Louis, MO 63123
314-638-0789
Rhee, Dong S AN
12809 Topping Meadows
St. Louis, MO 63131
314-872-8221
Rhee, Seoung E FP
3551 Evergreen Lane
St. Louis, MO 63125
314-892-6789
Ribaudo, J. Michael PS
11709 Old Ballas Rd.
St. Louis, MO 63141
Rich, Keith M NS
One Barnes Hospital Plaza
St. Louis, MO 63110
314-362-3566
Rich, Margaret M ORS
4949 Barnes Hospital Plaza
St. Louis, MO 63110
314-362-4080
Richards, Frank O GS
3737 N Kingshighway #206
St Louis, MO 63115
314-383-0133
Richardson, Michael S IM
8301 Delmar Blvd.
St. Louis, MO 63124
314-993-5321
Richardson, Thos F P
4949 Barnes Hosp Plaza 16415
St Louis, MO 63110
314-362-3901
Richmond, Michael R IM
11155 Dunn Rd #205
St. Louis, MO 63136
314-434-0770
Ridgeway, Wm G OPH
6680 Chippewa 2nd Floor
St. Louis, MO 63109
314-645-4940
Ries, Douglas A GS
3619 Brandy Wine St.
Oceanside, CA 92056
Rifkin, Shale GS
141 N. Meramec Ave.
St. Louis, MO 63105
314-863-8885
Riggio, Salvatore N PD
8822 Paragon Circle
St. Louis, MO 63123
314-821-0349
Riley, John J IM
P. O. Box 835
Bridgeton, MO 63044
314-739-4166
Riley, Louis T OBG
11709 Old Ballas Suite 202
St. Louis, MO 63141
314-567-6580

Riner, Ronald N IM
1034 S. Brentwood #854
St. Louis, MO 63117
314-727-9900
Ring, Edward M TS
621 S. New Ballas Suite 262
St Louis, MO 63141
314-567-4111
Ring, Lisa B D
12255 DePaul Dr.
Bridgeton, MO 63044
314-344-0004
Ritter, Hubert A OBG
1035 Bellevue #208
St. Louis, MO 63117
314-644-6262
Pizzo, Adolfo E CHP
555 N. New Ballas Rd.
Suite 100
St Louis, MO 63141
314-991-2466
Robben, G. Garry IM
10822 Sunset Plz.
St. Louis, MO 63127
314-872-3380
Robbins, Philip L CRS
621 S New Ballas Rd #611
St Louis, MO 63141
314-567-9930
Roberts, Harold K IM
434 S. Hanley Rd.
Clayton, MO 63105
Roberts, John P IM
7019 Northmoor
St. Louis, MO 63105
314-862-4990
Robertson, Frank G OBG
456 N. New Ballas
St. Louis, MO 63141
Robinson, Edith C CHP
2 Briar Oak
St Louis, MO 63132
Roblee, Melvin A OBG
1600 Westbrook Apt 228
Richmond, VA 23227
Roden, Vernon J PD
456 N New Ballas Rd #304
St Louis, MO 63141
314-567-6868
Rodrigo, Bernardo R AN
923 Town and Country Est Ct.
St. Louis, MO 63141
Rodriguez, Ubaldo R GS
4121 Union Rd. #216
St Louis, MO 63129
314-892-3502
Rogers, H. Bryan FP
819 Locust
St. Louis, MO 63101
314-621-4300
Rohrbaugh, James R CHN
777 S New Ballas Rd.
Suite 330E
St. Louis, MO 63141
314-991-1018
Rollo, John L PTH
11133 Dunn Rd.
St. Louis, MO 63136
314-355-2300
Roper, Chas L CDS
4989 Barnes Hosp Plaza
St Louis, MO 63110
314-361-0122
Rosecan, Marvin IM
P. O. Box 1679
Belleville, IL 62223
231-228-0000
Rosenbaum, Harry D OPH
522 N New Ballas Rd #364
St Louis, MO 63141
314-569-1557
Rosenbaum, Herbert E N
456 N New Ballas #290
St Louis, MO 63141
314-567-3970
Rosenberg, David S IM
11655 W. Florissant
Florissant, MO 63033
314-921-4420
Rosenblum, Barry N OTO
6125 Clayton Ave.
St. Louis, MO 63139
314-768-3222
Rosenthal, Debra D R
615 S. New Ballas Rd.
St. Louis, MO 63141
314-569-6031
Ross, Wm J PD
119 Church St #227
St Louis, MO 63135
314-521-1600
Roth, John J IM
Town & Country Med. Bldg.
2821 N. Ballas Rd.
St. Louis, MO 63131
314-872-7332
Rotskoff, Kenneth S OS
1031 Bellevue Ave. #310
St Louis, MO 63117
314-863-8050

---

*Doctor of osteopathy.

Roulhac, Geo E NS
P. O. Box 386
Sea Island, GA 31561
Rouse, Ernest T IM
1 Robin Hill Lane
St. Louis, MO 63124
Rouse, Ernest T III IM
1034 S Brentwood
St Louis, MO 63117
314-721-0666
Roush, Geo OM
10 Babler Lane
St. Louis, MO 63124
Roush, Randall D ORS
12255 DePaul Dr.
Bridgeton, MO 63044
314-739-7654
*Routsong, Rodney T NS
77 Westport Plaza Suite 355
St. Louis, MO 63146
314-469-3315
Roy, Tapankumar S TR
1325 S. Grand Blvd.
St. Louis, MO 63104
314-773-1974
Rubenstein, Melvin P
818 Hanamoor Court
St Louis, MO 63122
314-965-7785
Ruehl, Albert F PS
5403 Vicar Ct.
St Louis, MO 63119
Ruhling, Rudy GP
5203 Chippewa
St Louis, MO 63109
314-481-1562
Rumelt, Michael OPH
777 S New Ballas #231E
St. Louis, MO 63141
314-432-2156
Rutherford, James L P
4323 A Laclede Ave.
St. Louis, MO 63108
314-362-7881
Ruwitch, Joseph F Jr. IM
4989 Barnes Hosp Plaza 16413
St Louis, MO 63110
314-362-7275
Ryall, Jo-Ellyn M P
9216 Clayton Rd. Suite 105
St. Louis, MO 63124
314-868-7700
Ryan, Robt F Sr. OTO
2323 Manor Grove Dr. Suite 6
Chesterfield, MO 63017
Sabet, Abdollah A P
901 Clayton Rd.
Ballwin, MO 63011
314-227-7300
Sabeti, Mohebat P
6605 Clayton Ave. #403
St. Louis, MO 63139
314-882-2511
Sachar, Jerome D OBG
2821 N. Ballas Rd.
St. Louis, MO 63131
314-872-9206
Sachar, Leo A GS
230 S. Brentwood Blvd.
St Louis, MO 63105
314-361-3676
Saef, Jerold L IM
510 S. Kingshighway Blvd.
St. Louis, MO 63110
314-362-2809
Safi, Malaz OPH
1844 Harbor Mill Dr.
Fenton, MO 63026
314-622-5000
Saghir, Marcel T P
1034 S Brentwood Blvd
St Louis, MO 63117
314-862-4448
Saha, Nitai G U
12166 Old Big Bend Rd. #203
St. Louis, MO 63122
314-822-1413
Saha, Sudha P OBG
12166 Old Big Bend
St. Louis, MO 63122
314-434-6020
Sakmar, Douglas A PD
10004 Kennerly Rd #195B
St. Louis, MO 63128
314-849-5010
Salanga, Percival B FP
10542 Windswept Dr.
St. Louis, MO 63138
314-653-0111
Sale, Llewellyn Jr. IM
4910 Forest Park #312
St Louis, MO 63108
314-367-2757
Salinas, Mario OBG
10004 Kennerly Rd.
St Louis, MO 63128
314-849-3500
Salmon, M. L. GPH
2900 Lemay Ferry Rd
St. Louis, MO 63125
314-892-8211
Salvador, Antonio PTH
615 S. New Ballas Rd.
St. Louis, MO 63141
314-569-6130
Samet, John M IM
911 S. Brentwood Blvd. #208
St. Louis, MO 63105
314-727-2575
Sammons, Harry C AN
555 A South Gray Ave.
St. Louis, MO 63122
314-822-1271
Samson, Barry L CRS
522 N New Ballas Rd. #199
St. Louis, MO 63141
314-432-2323
Samudrala, Ramulu OPH
7520 Natural Bridge #201
St. Louis, MO 63121
314-487-1110
Sanchez, Abelardo B N
3525 S. Jefferson Ave. #111
St. Louis, MO 63118
314-771-8231
Sanders, Theodore E OPH
625 South Skinker
St Louis, MO 63105
Sandza, Joseph G Jr. TS
3015 N. Ballas Rd.
St Louis, MO 63131
314-432-1212
Santanello, William M FP
2425 N Broadway
St Louis, MO 63102
314-241-4455
Santillano, Antonio B PTH
6150 Oakland Ave.
St Louis, MO 63139
314-645-8510
Sasser, Wm F TS
621 S New Ballas Rd #542
St Louis, MO 63141
314-567-1841
Sata, Lindbergh S P
1221 S. Grand
St. Louis, MO 63104
314-771-7600
Sato, Geo PD
777 S. New Ballas Rd. 114E
St Louis, MO 63141
314-432-3338
Sato, Richard W PD
777 So. New Ballas Rd.#114E
St. Louis, MO 63141
314-432-3338
Sauer, Donald C GS
4910 Forest Park
St Louis, MO 63108
314-727-4576
Sauvage, Jacques P OBG
4911 Barnes Hosp Plaza
St Louis, MO 63110
314-362-3169
Savci, Hasan D. R
11712 Westham
St Louis, MO 63131
314-878-4680
Sawyer, James OBG
2520 N. Geyer Rd.
St. Louis, MO 63131
Schaefer, Glennon S GS
621 S. New Ballas Rd.
St Louis, MO 63141
314-872-3188
Schaerer, Jacques P NS
777 S New Ballas Rd
St Louis, MO 63141
314-567-5078
Schanzlin, David J OPH
3655 Vista
St. Louis, MO 63110
314-577-8265
Schaper, Ernest H FP
7200 Manchester Ave
St. Louis, MO 63143
314-645-7744
Schechter, Saml E IM
8000 Bonhomme St #106
St. Louis, MO 63105
314-725-8220
Scheele, Paul M IM
5479 Kenrick Park Drive So.
St. Louis, MO 63119
314-965-7201
Scheer, George L ORS
1034 So Brentwood #650
St Louis, MO 63105
314-721-7325
Scheibe, Robt G U
12575 Bickford Drive
St. Louis, MO 63131
Scheible, Robert F DP
3009 N. Ballas Ste.131
St Louis, MO 63131
314-432-5284
Schengber, John S P
777 S. New Ballas Rd. #330N
St Louis, MO 63141
314-567-5185
Scherr, James H PS
6 Jungerman Circle
St. Peters, MO 63376
314-567-9096
Schierman, Wm D IM
13 Beacon Hill
St. Louis, MO 63141
314-862-4141
Schlafly, Bruce S CRS
10004 Kennerly Rd.
St. Louis, MO 63128
502-897-6101
Schlafly, Edward F Jr. CRS
224 South Woods Mill Rd #330
Chesterfield, MO 63017
314-576-7013
Schlansky, Seymour M PD
2730 Highway 94 South #200
St. Charles, MO 63303
314-441-5437
Schmid, Tania L IM
1404 Peacock Lane
Brentwood, MO 63144
Schmidt, Dennis A P
6150 Oakland
St Louis, MO 63139
314-645-8510
Schmidt, Edwin H P
10240 Schuessler Rd.
St Louis, MO 63128
Schmidt, Edwin H III IM
1035 Bellevue Ave
St Louis, MO 63117
314-645-3400
Schneider, Paul G IM
6400 Clayton Rd. #201
St. Louis, MO 63117
314-781-8405
Schneider, Robert J IM
522 N. New Ballas Rd. #149
St. Louis, MO 63141
314-567-1902
Schneider, Sally L AN
621 S. New Ballas Rd. #662
St. Louis, MO 63141
314-872-8221
Schoch, Lawrence H OPH
Midwest Regional Retina, Ltd
1245 Graham Rd. #107
Florissant, MO 63031
314-367-1181
Schoeck, Albert F AN
14013 Baywood Village Dr.
Chesterfield, MO 63017
314-576-1459
Schoedinger, George P III OPS
12615 Old Tesson Road
St Louis, MO 63128
314-849-0311
Schoenecker, Perry L ORS
One Barnes Hosp Plz #11300
St. Louis, MO 63110
314-362-6548
Schoentag, John S D
777 S. New Ballas Rd.
Suite 302-W
St. Louis, MO 63141
314-567-3180
Schonfeld, Gustav IM
4566 Scott Ave. Box 8113
St Louis, MO 63110
314-362-7038
Schopp, Alvin C OPS
12345 Gaillard Dr.
St Louis, MO 63141
Schranck, Chas R Sr. AN
6420 Clayton Rd.
St. Louis, MO 63117
314-644-3000
Schreiber, David J N
2 St. Anthonys Way #103
Alton, IL 62002
Schrick, Richard E OTO
220 W. Argonne -Ste 100
St. Louis, MO 63122
314-966-5252
Schuessler, Edward C AN
P. O. Box 31696
St. Louis, MO 63131
314-965-0919
Schuessler, Wolfgang P IM
6744 Clayton Rd
St Louis, MO 63117
314-644-1901
Schuh, Marlys E GS
456 N. New Ballas Rd.
Creve Coeur, MO 63141
314-569-0130
Schulman, Jeffrey I PDA
522 N New Ballas Rd.
Suite 122
St Louis, MO 63141
314-569-1881

---

*Doctor of osteopathy.

Schultz, Earl P 3009 North Ballas Rd. Suite 209 St Louis, MO 63131 314-567-3663	N
Schultz, Irwin 26 Arundel Pl St Louis, MO 63105 314-355-5300	IM
Schulz, Richard 6150 Oakland St Louis, MO 63139 314-645-9003	R
Schwartz, Henry G 4901 Barnes Hospital Plaza St Louis, MO 63110 314-362-3575	NS
Schwartz, Melvin M 2821 N Ballas #255 St Louis, MO 63131 314-872-9206	OBG
Schwarz, Luis H 1034 S. Brentwood Blvd. #520 St Louis, MO 63117 314-726-6610	P
Schweiss, John F 1325 S. Grand St Louis, MO 63104 314-771-7600	AN
Schweitzer, James M 3009 New Ballas #100 St. Louis, MO 63131 314-432-1111	IM
Scott, Elwin P 14441 Cameo Dr. NO Sun City, AZ 85351	GP
Scott, Horace W 100 N. Euclid #100 St. Louis, MO 63108 314-727-0012	R
Scully, Thomas F 911 S. Brentwood #228 St. Louis, MO 63105 314-725-6551	U
Sedgwick, William G 1034 S. Brentwood St. Louis, MO 63117 314-721-7325	ORS
Seed, John 6400 Clayton Road Suite 412 St Louis, MO 63117 314-647-9100	P
Seeley, James J 10004 Kennerly Rd. Suite 355 St Louis, MO 63128 314-849-3050	GS
Seib, Geo A 2323 Lafayette Ave St Louis, MO 63104 314-776-2323	FP
Selhorst, John B 3660 Vista #304 St. Louis, MO 63110 314-577-6082	P
Senturia, Hyman R 216 S. Kingshighway St Louis, MO 63108 314-441-6730	R
Sertl, George O 3009 N. Ballas Road #105 St Louis, MO 63131 314-569-0612	ORS
Sertl, James F 950 Francis Pl St Louis, MO 63105 314-863-7766	IM
Sertl, John D 6485 Westway Road St. Louis, MO 63109	FP
Sessions, Donald G 4911 Barnes Hosp Plaza St. Louis, MO 63110 314-362-7509	OTO
Sexton, Darl L 14 Crestwood Dr. St. Louis, MO 63105 314-862-5252	IM
Shah, Anwar 1027 Bellevue Ave St Louis, MO 63117 314-644-6800	OPH
Shah, Jitendra P 10004 Kennerly Rd #360 St. Louis, MO 63128 314-849-2735	U
Shah, Modaser 2694 Victron Dr. St. Louis, MO 63129 314-644-8000	P
Shahan, Philip T 211 N Meramec St Louis, MO 63105 314-726-0053	OPH
Shaikun, Gerald L 410 N. Newstead #11W St. Louis, MO 63108 314-441-6730	R
Shanahan, Philip J 1 Chilton Ln St. Louis, MO 63141 314-567-5407	GP
Shands, Courtney III 456 N. New Ballas Rd. #348 St. Louis, MO 63141 314-567-6071	GS
Shaner, Thos P 2821 North Ballas #C65 St Louis, MO 63131 314-872-7400	OBG
Shank, Robt E 1325 Wilton Lane St Louis, MO 63122 314-362-7465	IM
Shapiro, Herbert N 6651 Chippewa St #312 St Louis, MO 63109 314-781-4311	GS
Shapiro, Marc J St. Louis Univ Hosp Dept GS 1325 South Grand Blvd. St. Louis, MO 63104 314-577-8365	GS
Shapiro, Susan J 4939 Audubon St. Louis, MO 63110 314-362-8530	R
Shapleigh, John B II 222 S. Woods Mill Rd. #580 Chesterfield, MO 63017 314-862-3730	IM
Sharp, Austin R 901 Clayton Rd Ballwin, MO 63011 314-391-6300	PD
Shatz, Burton A 10287 Clayton Rd St Louis, MO 63124 314-997-3212	IM
Shaw, Edward J 819 Locust St. St. Louis, MO 63101 314-621-4300	GS
Shaw, Richard C 11155 Dunn Rd. Suite 212E St Louis, MO 63136 314-355-4571	TS
Sheehan, Paul J 12255 DePaul Bridgeton, MO 63044 314-771-7600	GS
Sheffner, Paul W 763 S. New Ballas Rd. #350 St. Louis, MO 63141 314-427-2424	P
Shehadi, Sameer I 1325 South Grand Blvd. St. Louis, MO 63104 314-577-8793	PS
Shelton, Becky R 3009 N. Ballas Suite 130 St. Louis, MO 63131 314-569-0505	OBG
Shelton, Earl W 4451 Natural Bridge Ave St Louis, MO 63115 314-385-8752	IM
Shen, Anthony S 12632 Conway Club Ct. St. Louis, MO 63141 314-569-5121	IM
Shen, Hang C 14907 Greenleaf Valley Dr. Chesterfield, MO 63017 314-727-6300	R
Shen, Jerome T 7132 Kingsbury Blvd. St Louis, MO 63130 314-962-8122	PD
Shen, Winston 1221 S. Grand Blvd. St. Louis, MO 63104	P
Sheridan, John J 6400 Clayton Rd. #302 St Louis, MO 63117 314-647-8562	ORS
Sherman, Laurence A 4050 Lindell Blvd. St. Louis, MO 63108 314-658-2103	PTH
Sherman, W. Gary 13131 Tesson Ferry Rd. #105 St Louis, MO 63128 314-849-3320	PD
*Sherrod, Glenn M 12255 DePaul Dr. Suite 770 Bridgeton, MO 63044 314-291-2446	N
Sherwin, Charles S 911 S. Brentwood #226 St Louis, MO 63105 314-725-4747	CS
Shieber, Wm P. O. Box 14109 St Louis, MO 63178 314-454-7181	GS
Shields, John B 33 Flower Hill Ct. St Louis, MO 63122 314-771-7600	R
Shine, Thomas E 11155 Dunn Rd. Suite 303 St. Louis, MO 63136 314-741-3400	GS
Shitut, Ravindra V 12615 Old Tesson Rd. St. Louis, MO 63128 314-849-0311	ORS
Shively, Raymond E 10004 Kennerly Ste 374B St. Louis, MO 63128 314-849-5151	PS
Shively, Robert A 4989 Barnes Hosp Plaza 11300 St. Louis, MO 63110 314-362-6549	ORS
Shockley, Karen D 1905 Hickory St. St. Louis, MO 63104 314-773-5962	GP
Shore, Bernard L 4652 Maryland St. Louis, 63108 314-367-3113	IM
Short, Charles D 3015 N. Ballas Rd. St. Louis, MO 63131 314-569-5207	PTH
Shroff, Kunkur 533 Couch Ave. #155 St. Louis, MO 63122 314-965-2215	OBG
Shuman, Jos S 12255 DePaul Dr. Bridgeton, MO 63044 314-739-5557	P
Shuman, Robert B 4652 Maryland Ave. St. Louis, MO 63108 314-569-3529	IM
Shuttari, Mir F 6150 Oakland St. Louis, MO 63139 314-768-3000	IM
Shyken, Herman 456 N New Ballas Rd. St. Louis, MO 63141 314-721-0242	R
Sicard, Gregorio A One Barnes Hosp Plaza #5103 St. Louis, MO 63110 314-362-7400	GS
Siddiqui, Farzanna Q 875 Haller Woodriver, IL 62095 618-876-3600	P
Siddiqui, Jawed H 11115 New Halls Ferry #301 Florissant, MO 63033 314-829-2770	IM
Siegel, Barry A 510 S. Kingshighway Blvd. St. Louis, MO 63110 314-362-2809	NM
Sievers, Geo F 242 Worthing Dr. St. Louis, MO 63119 314-843-1900	OBG
Siesener, Herbert H 1301 Hollins St. Louis, MO 63135	IM
Sigmund, Charles J Jr. 1400 Lemay Ferry Rd. #101 St. Louis, MO 63124 314-544-5005	IM
Sigmund, Chas A 12255 DePaul Rd Ste. #109 Bridgeton, MO 63044 314-739-9293	OPH
Silber, Sherman J 224 South Woods Mill Rd. Suite 730 Chesterfield, MO 63017 314-576-1400	U
Silver, Bernd 950 Francis Place #317 St Louis, MO 63105 314-727-5510	OPH
Silverberg, Chas 505 Coeur De Royale #204 St Louis, MO 63141 314-843-7333	IM
Silvermintz, Saul D 456 N. New Ballas Rd. #242 St Louis, MO 63141 314-567-4990	IM
Simon, David L 9705 Watson Rd. #207 St. Louis, MO 63126 314-726-5477	PD
Simon, Nathan M 32 Crestwood St Louis, MO 63105 314-361-7817	P

---

*Doctor of osteopathy.

Simons, Paul S PD
4570 Audubon
St Louis, MO 63110
314-658-5243
Simpson, Joseph R
4939 Audubon #5500
St. Louis, MO 63110
314-362-3470
Simril, Wayne A DR
21 Somerset Downs
St Louis, MO 63124
Sisk, James C D
146 Frontenac Forest
St. Louis, MO 63131
314-725-7007
Sislen, Donald R IM
621 S New Ballas Rd #460
St Louis, MO 63141
314-432-3456
Sisson, Richard G GS
4910 Forest Park Blvd. #206
St Louis, MO 63108
314-361-3676
Skimming, W. Lee ORS
621 S. New Ballas Suite 43
St. Louis, MO 63141
314-872-8015
Skinner, John S IM
31 Willow Hill Rd.
St. Louis, MO 63124
Skor, Donald A END
4989 Barnes Hospital #17416
St. Louis, MO 63110
314-362-5100
Sletten, Ivan W P
11155 Dunn Rd
St Louis, MO 63136
314-355-1244
Slocum, Stephen G OPH
1034 S. Brentwood
Suite 694
St. Louis, MO 63117
314-721-8250
Smiley, Wm L OBG
2715 Union Blvd
St Louis, MO 63113
314-381-2741
Smit, Herbert M OTO
8724 W Kingbury
St Louis, MO 63124
Smith, Benj F OBG
3009 N. Ballas Rd. Ste 244
St. Louis, MO 63131
314-727-3439
Smith, Dermott A P
1221 S Grand Blvd
St Louis, MO 63104
314-771-7600
Smith, Emily L DR
510 S Kingshighway
St Louis, MO 63110
314-362-2823
Smith, Garland F ORS
9047 Monmouth Drive
St. Louis, MO 63117
314-872-8015
Smith, Herbert P GP
2265 Florida Mango Rd
West Palm Beach, FL 33406
Smith, Hugh R OBG
5105 Melilla Dr.
St Louis, MO 63128
314-821-3900
Smith, James B P
110 S Central Ave #400
St Louis, MO 63105
314-862-6007
Smith, Kathleen P
RR 1, Box 312
DuQuoin, IL 62832
Smith, Kenneth R Jr. NS
3635 Vista Ave. At Grand
P. O. Box 15250
St. Louis, MO 63110
314-577-8796
Smith, Morton E OPH
660 S Euclid St Box 8096
St Louis, MO 63110
314-362-7164
Smith, Peter G OTO
4911 Barnes Hosp Plaza #108
St. Louis, MO 63110
314-362-7509
Smith, Robt W R
10010 Kennerly Rd
St Louis, MO 63128
314-842-3560
Smith, Sidney E IM
709 S. Skinker Blvd. #502
St. Louis, MO 63105
Sobky, George H DR
2305 W. Georgia
Louisiana, MO 63353
314-745-5533
Sohn, Richard N
4989 Barnes Hosp Plaza 17303
St Louis, MO 63110
314-362-7240

Solanki, Nareshkumar J PD
600 Medical Dr.
#202 Wentzville
Wentzville, MO 63385
314-327-5732
Solomon, Felix G AN
11326 Mosley Lane
St Louis, MO 63141
314-569-1147
Sommer, Conrad S P
2 Tamarack Drive
St. Louis, MO 63124
314-863-0871
Sommer, Rand W IM
1034 South Brentwood Blvd
St. Louis, MO 63117
314-721-0666
Sommer, Ross B IM
1034 S Brentwood St #1050
St Louis, MO 63117
314-721-0666
Soorya, Narendir T P
6651 Chippewa
St. Louis, MO 63109
Sopuch, John A OBG
500 Northwest Plz #523
St. Ann, MO 63074
314-739-8500
Sosna, Jacob F IM
911 S. Brentwood
St. Louis, MO 63105
314-725-2100
Soto, Albert A P
522 N New Ballas Rd #317
St Louis, MO 63141
314-567-1958
Spalding, Donald G R
621 S New Ballas Rd
St Louis, MO 63141
314-569-6031
Spector, Gene W P
216 S. Kingshigway Blvd.
St. Louis, MO 63110
314-441-6730
Spector, Gershon OTO
4911 Barnes Hospital Plaza
St Louis, MO 63110
314-362-7510
Spencer, Jean F OPH
537 Warren
St. Louis, MO 63130
314-725-9257
Speno, Angelo A CM
1001 N Highway Drive
Fenton, MO 63026
314-343-3249
Spernoga, John F IM
911 S. Brentwood #208
St. Louis, MO 63105
314-725-0539
Spewak, Robert D PD
9845 Wild Deer Road
St. Louis, MO 63124
314-965-2641
Spivack, Alan R IM
224 S. Woods Mill Rd. #620
Chesterfield, MO 63017
314-434-8001
Spoeneman, Marlin C GP
1155 Hillsboro Mile #608
Hillsboro Bch, FL 33062
Spray, Thomas L GS
400 S. Kingshighway Ste5W24
St. Louis, MO 63110
314-454-6165
Sprehe, Samuel E OTO
1403 S. Rock Hill Rd.
St. Louis, MO 63119
314-968-3989
Spurgeon, Stephen EM
1031 Bellevue Ave. #300
St. Louis, MO 63117
314-781-2252
Spurrier, Mark H OPH
1034 S. Brentwood #550
St. Louis, MO 63117
314-937-8855
Squitieri, Alphonse J IM
9616 Lackland Rd.
St. Louis, MO 63114
314-427-1855
Srisuro, Chotchai OBG
533 Couch Ave #287
St. Louis, MO 63122
314-821-9144
Srivisal, Somnuk R
1877 Schoettler Valley Dr.
Chesterfield, MO 63017
314-781-1103
Stafford, Walter R OPH
141 N Meramec Ave #201
St. Louis, MO 63105
314-725-1067
Starke, Keith M IM
9701 Landmark Parkway Dr.
Suite 210
St. Louis, MO 63127
314-567-6000
Starkloff, Gene B GS
5266 Westminster
St Louis, MO 63108

Stavrides, Pete D ORS
11140 S. Towne Sq. #105
St. Louis, MO 63123
314-352-5400
Steele, Jack T FP
3466 Bridgeland
Suite 110
Bridgeton, MO 63044
314-291-6660
Steiling, Sylvia A GS
10007 Kennerly Rd.
St. Louis, MO 63128
314-849-2727
Stein, Harry J FP
2304 Hord Ave.
St. Louis, MO 63136
314-383-1100
Steinberg, Franz U PM
216 South Kingshighway
St Louis, MO 63110
314-454-7756
Steiner, Alexander J IM
141 N Meramec Ave Ste 2
St. Louis, MO 63105
314-725-2332
Steinhardt, George F U
1465 S. Grand
St. Louis, MO 63104
314-577-5334
Stephen, C. Ronald AN
15801 Harris Ridge Court
Chesterfield, MO 63017
Sterkel, Richard L IM
1035 Bellevue
St Louis, MO 63117
314-644-6161
Stevens, Julia C CFH
660 S. Euclid Box 8096
St. Louis, MO 63110
314-362-3740
Stewart, L Paul OPH
8 Broadview Farm Road
St. Louis, MO 63141
314-567-6296
Stickle, Arthur W OPH
135 W Adams #104
St. Louis, MO 63122
Stickley, Louis P CD
621 S New Ballas Rd #3005
St Louis, MO 63141
314-569-6168
Stillings, Wayne P
1034 S Brentwood #1160
St. Louis, MO 63117
314-721-8242
Stohr, Paul E NS
1035 Bellevue Ave
St Louis, MO 63117
314-644-6565
Stokes, James M GS
7121 Washington Ave.
St. Louis, MO 63130
314-862-1456
Stoliar, Bruce FM
2110 Crystal Drive
St. Louis, MO 63131
314-838-8244
Stoneman, William III GS
1402 S Grand Blvd
St Louis, MO 63104
314-577-8201
Stratmann, Henry G IM
4903 Southridge Park Dr.
St. Louis, MO 63129
Strecker, William B ORS
One Barnes Hosp Plz #11300
St. Louis, MO 63110
314-362-7311
Strobach, Kurt F OBG
304 Cabin Grove Lane
St. Louis, MO 63141
314-739-6550
Stronach, Linda L IM
1035 Bellevue Ave. Suite 316
St. Louis, MO 63117
314-644-3250
Stronsky, David ORS
12100 Carberry
St Louis, MO 63131
Stroud, Malcolm H OTO
522 N. New Ballas #206
St. Louis, MO 63141
314-362-7547
Stryker, Wm I P
6400 Clayton Rd. Suite 401
St Louis, MO 63117
314-647-0411
Stuebner, Roland W GS
16925 Hierba Drive Apt 226
San Diego, CA 92128
Suba, Antonio R GS
12085 Heatherdane
St Louis, MO 63131
314-991-0280
Sudekum, Joseph M ORS
621 S. New Ballas Rd. #53
St Louis, MO 63141
314-569-1212

---

*Doctor of osteopathy.

Sudholt, Alfred F OBG
500 Northwest Plaza Ste 501
St. Ann, MO 63074
314-291-2614
Sueper, Robert H PTH
11636 Adminstration Drive
St. Louis, MO 63146
Sullivan, Clement J IM
6744 Clayton Rd Rm 311
St Louis, MO 63117
314-644-0151
Sullivan, Wm W IM
12166 Big Bend Blvd
St. Louis, MO 63122
314-821-9150
Sumer, Cengiz M P
220 Runnymede Dr
St Louis, MO 63141
314-291-6135
Sumer, Emel A CHP
3394 McKelvey Rd.
Bridgeton, MO 63044
314-291-6135
Summers, John B PD
9701 Landmark Parkway Dr.
St. Louis, MO 63127
314-849-3885
Summers, Thomas F GP
305 1/2 Oak Street
Auburndale, FL 33823
Sundermann, Richard H P
3009 N. Ballas Rd. #110
St. Louis, MO 63131
314-862-6007
Sunshine, Herbert U
456 N New Ballas #348
St Louis, MO 63141
314-567-6071
Sutter, Richard A OM
7215 Greenway Dr.
St Louis, MO 63130
314-621-4300
Swaykus, Bernard T IM
3394 McKelvey Rd.
Bridgeton, MO 63044
314-291-3410
Swope, Joseph A IM
9242 Grant Farm Tr.
St. Louis, MO 63126
314-842-3200
Sylvanovich, W. Richard GE
615 S. New Ballas Ste.3008
St. Louis, MO 63141
314-569-6973
Szoko, Edward R
10010 Kennerly Rd.
St. Louis, MO 63128
314-946-6657
Talwar, Tara IM
430 Whitree Lane
Chesterfield, MO 63017
Tanaka, Geo M IM
5611 Sutherland
St Louis, MO 63109
Tanphaichitr, Kongsak IM
12166 Royal Valley Dr.
St. Louis, MO 63141
314-839-4339
Tashma, Sigmund S US
904 Dalkeith Lane
St Louis, MO 63132
Tatkow, Robert W ORS
456 N New Ballas
Suite 369
St Louis, MO 63141
314-569-1830
Taute, Hermann OBG
12049 Heatherdane Dr.
St. Louis, MO 63131
Taylor, Eugene D OBG
2715 N Union
St Louis, MO 63113
314-385-5550
Tayob, Anver A ORS
1325 S Grand Blvd
St Louis, MO 63104
314-577-8850
Tekwani, Hiralal T OPH
9911 Kennerly Road
St Louis, MO 63128
314-842-2020
Tepper, Arnold IM
777 S New Ballas Rd #214 E
St Louis, MO 63141
314-432-6688
Ternberg, Jessie L PDS
400 S. Kingshighway Ste 5W12
St Louis, MO 63110
314-454-6000
Terschluse, David A GS
12255 DePaul Dr.
Bridgeton, MO 63044
Tess, Allen F OPH
1245 Graham Rd #502
Florissant, MO 63031
314-837-3667

Tess, Melvin J PH
1501 Switzer Ave
St Louis, MO 63147
Tessier, John E ORS
621 S. New Ballas Rd.
St. Louis, MO 63141
314-432-7133
Thale, Thomas R P
351 Meadowbrook Drive
Ballwin, MO 63011
Thawley, Stanley OTO
4911 Barnes Hospital Plaza
St Louis, MO 63110
314-362-7509
Thiel, J. Allen A
621 South New Ballas Rd
# 368
St Louis, MO 63141
314-872-7958
Thiele, Belmont R GS
6862 W. Baile Rd.
Las Vegas, NV 89102
Thierauf, Chas G R
9444 Sunny Creek
St Louis, MO 63127
314-865-3333
Thoma, George E Jr. IM
5 Georgian Acres
St. Louis, MO 63131
Thomas, J. Regan PSF
4911 Barnes Hosp plz
St. Louis, MO 63110
314-362-7529
Thomas, Lewis J JR AN
700 S Euclid
St Louis, MO 63110
314-362-6928
Thomasson, Jeffrey L DR
6604 Pershing Ave.
St. Louis, MO 63130
314-569-1761
Thomasson, Mary W R
935 Tirrill Farms Rd.
St. Louis, MO 63124
314-837-3720
Thomasson, Robert E GS
935 Terrill Farms Rd.
St. Louis, MO 63124
314-837-3721
Thompson, M. Bryant OBG
224 South Woods Mill Rd.
#720
Chesterfield, MO 63017
314-576-6166
Thomson, William M IM
224 S. Woods Mill Rd.
#500
Chesterfield, MO 63017
314-878-6260
Thurmann, Manfred IM
6400 Clayton Road Suite 212
St Louis, MO 63117
314-645-6450
Tichenor, Robt W FP
P. O. Box 8568
St Louis, MO 63126
314-843-1111
Tillman, Mary A PD
Northland Office Bldg #306
St. Louis, MO 63136
314-385-5522
Tindall, Robt N OTO
3719 Jones St.
Sioux City, IA 51104
Tippett, Jack C ORS
7709 Cloverlea Dr
St. Louis, MO 63123
314-658-5702
Tobey, Albro C Jr. OBG
777 S. New Ballas Rd. #215 E
St. Louis, MO 63141
314-567-7303
Tominack, Rebecca L IM
Monsanto
800 N. Lindbergh A3NH
St. Louis, MO 63167
314-694-4572
Torin, Bernice A OBG
951 Old Bonhomme
St Louis, MO 63132
Totty, William G R
510 S. Kingshighway
St. Louis, MO 63101
Treiman, Robt C IM
7 Radnor Rd
St Louis, MO 63131
Trigg, Joseph F GP
139 N. Central Ave. Apt K
St. Louis, MO 63105
Triska, Roland A PD
533 Couch #120
St. Louis, MO 63122
314-966-3324
Trotta, Philip C DR
898 Durrow Drive
St. Louis, MO 63141
314-567-5957
Trotter, Francis O Jr. R
112 Walnut Drive
Carrollton, MO 64633

Trotter, John L N
660 S. Euclid Box 8111
St. Louis, MO 63110
314-362-7177
Trueblood, Alva C OBG
731 N. Taylor
St Louis, MO 63122
314-965-9200
Trugly, Edith S P
777 S. New Ballas Rd.
St. Louis, MO 63141
314-569-0811
Tschudin, Garland PD
Rt 2 Box 16
Pacific, MO 63069
Tsifutis, Argyrios A PD
3434 Bridgeland
Bridgeton, MO 63044
314-291-4994
Tucker, Dolores P D
224 S. Woods Mill Rd.
Chesterfield, MO 63017
314-878-2556
Tucker, Eugene F PTH
6420 Clayton Rd
St Louis, MO 63117
314-768-8000
Tucker, Geo L GS
224 S. Woods Mill Rd.
670
Chesterfield, MO 63017
314-434-3031
Tucker, Robert E ORS
533 Couch Ave. #220
St. Louis, MO 63122
314-966-0111
Turgeon, Ronald P PTH
6420 Clayton Rd
St Louis, MO 63117
314-644-3000
*Turner, Timothy T FP
1755 S. Grand
St. Louis, MO 63104
314-771-0500
Tuteur, Peter G IM
660 S. Euclid Box 8043
St. Louis, MO 63110
314-362-6985
Twedell, Donald L OM
6670 Estero Blvd #520A
Ft Myers Beach, FL 33931
Uchiyama, Robert C IM
224 S. Woods Mill Road
Chesterfield, MO 63017
314-394-1525
Uhlemeyer, Henry A OTO
12017 Point Oak Rd.
St Louis, MO 63131
Ungvari, Jos C GS
6500 Chippewa Ste 107
St Louis, MO 63109
314-351-1480
Vacca, Jos B IM
1489 Minmar Drive
St. Louis, MO 63122
Vadlamani, S. GS
6651 Chippewa Suite 218
St Louis, MO 63109
314-781-1580
Vafi, Houshang P
3125 Lemay Ferry Rd.
St Louis, MO 63125
314-892-4555
Valach, Frank J OBG
4 Nassau Circle
St. Louis, MO 63146
Valtierra, Cesar A P
6744 Clayton Rd #301
St Louis, MO 63117
314-781-2012
Van Amburg, Albert L III IM
4910 Forest Park #202
St. Louis, MO 63108
314-361-7786
Van Norman, Robt T PS
6651 Chippewa
St Louis, MO 63109
314-644-0450
Van Ryn, Jacques S ORS
12255 DePaul Dr. Suite 360
Bridgeton, MO 63044
314-291-7510
Vandivort, Paul M Jr. P
141 N. Meramec
St. Louis, MO 63105
Vandover, John T GP
3 Grantwood Lane
St Louis, MO 63123
Vannier, Michael W R
510 S. Kingshighway
St. Louis, MO 63110
314-362-8467
VanGoidsenhoven, Guy E IM
6400 Clayton Road #316
St Louis, MO 63117
314-644-5656
Vardeleon, Roger V GS
10004 Kennerly Rd.
St. Louis, MO 63128
314-843-5555

---

*Doctor of osteopathy.

Vargas, Teodoro FP
319 N First St
Pacific, MO 63069
314-257-3946
Vatterott, Paul B GP
55 Chaminade Dr
St Louis, MO 63141
Vatterott, Paul B Jr. IM
1538 Woodlake Dr.
Chesterfield, MO 63017
314-434-1600
Velasco, Ernesto T OM
1705 S Third
St. Louis, MO 63104
314-436-5100
Venable, H. Phillip OPH
407 Oak Street
Ballwin, MO 63021
Verde, Julian N R
7440 Sumerset Ave.
St. Louis, MO 63105
314-645-9003
Vest, James C TS
13611 Barrett Office Dr. 102
Manchester, MO 63011
Viamontes, Jorge A P
11745 Olive St. Rd.
St Louis, MO 63141
314-567-5011
Vickar, Garry M P
1245 Graham Rd Rm 506
Florissant, MO 63031
314-837-4900
Vierling, Stephen E ORS
10004 Kennerly Rd.
St. Louis, MO 63128
Viers, Wayne A OTO
220 W. Argonne - Ste. 100
St Louis, MO 63122
314-966-5252
Vijungco, Herminia D AN
11133 Dunn Road
St. Louis, MO 63136
314-355-2300
Vijungco, Jose G R
10010 Kennerly Rd.
St. Louis, MO 63128
314-842-3560
Villafuerte, Nila A AN
12563 Hibler Woods Dr.
St Louis, MO 63141
314-434-1500
Villafuerte, Renato G CLP
14560 Manchester Rd.
Ballwin, MO 63011
Villamar, Elizabeth N OBG
8059 Watson Rd.
St Louis, MO 63119
314-961-8206
Villarama, Antonio P GS
P. O. Box 177
High Ridge, MO 63049
314-677-3469
Virant, John A OTO
119 S. Spoede Rd
St Louis, MO 63141
Vitale, Anthony J GS
81 Burning Tree
Chesterfield, MO 63017
Vitale, Nicholas S GP
614 Coachlight Lane
Hazelwood, MO 63042
Vitale, Stephen J D
14377 Woodlake Dr. #108
Chesterfield, MO 63017
314-434-8477
Viviano, Joseph G OBG
39 Berry Road
Glendale, MO 63122
314-351-9091
Vollmar, Lewis C Jr. D
10004 Kennerly Rd #300
St Louis, MO 63128
314-842-4840
Vollmar, Theodore M R
6150 Oakland Ave.
St. Louis, MO 63139
314-768-3061
Votaw, Robt E OTO
10 Warson Terrace
St Louis, MO 63124
Vournas, Christopher G IM
12255 DePaul Dr Suite 865
Bridgeton, MO 63044
314-291-7730
Vournas, George C CD
12255 DePaul Dr.
Bridgeton, MO 63044
314-291-7730
Wacker, Leo L FP
3563 Ritz Center Dr
St Louis, MO 63125
314-892-3132
Wagan, Primitiva C IM
300 S Grand
St Louis, MO 63103
314-658-5648

Wagner, John R CRS
3009 N Ballas
St Louis, MO 63131
314-569-0612
Waite, John G P
77 Westport Plaza, Suite 368
St Louis, MO 63146
314-434-1560
Wald, Stanley M IM
4511 Forest Park Blvd
St Louis, MO 63108
314-367-5308
Walentik, Corinne PD
7234 Princeton Ave.
St Louis, MO 63130
*Walker, David Brooks D
11245 St. Charles Rock Rd.
Bridgeton, MO 63044
314-739-6300
Walker, Francis S NS
1035 Bellevue Ave
St Louis, MO 63117
314-644-6565
Walker, Harvey Jr. IM
138 N. Meramec Ave.
St. Louis, MO 63105
314-721-7227
Walker, J Leslie OBG
11709 Old Ballas Rd. #202
St. Louis, MO 63141
314-567-6580
Wall, Lester E PDA
12166 Old Big Bend #106
St. Louis, MO 63122
314-821-2100
Walsh, Barbara A OBG
621 S. New Ballas Rd. #4005
St. Louis, MO 63141
314-567-5016
Walsh, James W IM
1034 S Brentwood Blvd
St Louis, MO 63117
314-721-0666
Walter, Wm L OPH
135 W Adams #104
St Louis, MO 63122
314-892-8211
Walters, Henry W D
275 N. Union Blvd.
St. Louis, MO 63108
Waltman, Stephen R OPH
456 N. New Ballas Rd. #118
St. Louis, MO 63141
314-367-1600
Walz, Bruce J TR
4939 Audubon Ave. #5500
St. Louis, MO 63110
314-525-1688
Wasserman, Alan CBG
41 Highview Circle
Denton, TX 76205
Wasserman, Gary M OBG
2821 N. Ballas Rd.
St. Louis, MO 63131
Wasserman, Helman C OBG
911 S Brentwood Blvd
St Louis, MO 63105
314-721-8852
Wasserman, Mark S OBG
224 S. Woods Mill Rd.
Chesterfield, MO 63017
314-532-0999
Waters, Hugh R IM
224 S. Woods Mill Rd. #460
Chesterfield, MO 63017
314-576-0933
Waxelman, Roger J PD
665 Big Bend
Ballwin, MO 63021
314-391-8726
Wayne, Sherwyn J ORS
439 South Kirkwood Rd. #215
St. Louis, MO 63122
314-966-8887
Webb, Karen B IM
1402 South Grand Rm C306
St. Louis, MO 63104
314-968-1015
Webb, Paul B Jr. OPH
6651 Chippewa St #203
St Louis, MO 63109
314-647-8015
Webber, Wm B PS
6400 Clayton #110
St Louis, MO 63117
314-781-2889
Weber, J. Russell ORS
533 Couch Ave.
Suite 220
St Louis, MO 63122
314-966-0111
Weber, Thomas R PDS
1465 S. Grand Blvd.
St. Louis, MO 63104
314-577-5629
Wee, Geo C GS
P. O. Box 835
Manchester, MO 63011

Weeks, Paul M PS
4949 Barnes Hospital Plaza
Suite 17424
St Louis, MO 63110
314-362-7390
Weiler, Thos J GS
615 South New Ballas Rd
St Louis, MO 63141
314-569-6816
Weinhaus, Robt S P
868 Albey Lane
St. Louis, MO 63132
314-771-6400
Weir, Don C R
625 Sherwood Dr
St Louis, MO 63119
314-645-2638
Weir, Royal A CS
1012 Cla Ter Ri Dr
Ballwin, MO 63011
Weis, Landy PTH
11133 Dunn Rd. # B103
St Louis, MO 63136
314-355-2300
Weiss, Alan N CD
4989 Barnes Hosp Plaza
17312 W. Pavilion
St Louis, MO 63110
314-362-7825
Weiss, Howard N
141 N Meramec Ave
St Louis, MO 63105
314-726-3202
Weiss, Stuart N
4989 Barnes Hospital Plaza
Suite 16304
St Louis, MO 63110
314-367-3122
Weldon, Clarence S CDS
4989 Barnes Hosp Plz
3108
St Louis, MO 63110
314-362-7260
Weldon, Virginia V PD
800 N. Lindbergh Blvd. #D1A
St. Louis, MO 63167
314-362-6827
Wells, Samuel A Jr. GS
4960 Audubon Ave.
St. Louis, MO 63110
314-362-7305
Welsh, Laurence C FP
103 W. Old Watson Road
St. Louis, MO 63119
314-962-8472
Wenneker, Alvin S IM
8112 Delmar Blvd
St Louis, MO 63130
314-725-7400
Werner, Wm A IM
6015 Childress Ave.
St Louis, MO 63109
314-569-6958
West, Joseph W OTO
220 W. Argonne Suite 200
St. Louis, MO 63122
314-966-6656
West, Michael A GS
4960 Audubon Ave.
St. Louis, MO 63110
314-362-5210
Westerman, Robt N GS
6744 Clayton Rd # 202
St Louis, MO 63117
314-647-3584
Westrup, Ellsworth A GP
#11 Shady Hollow Drive
Eureka, MO 63025
314-961-0138
Wexler, Stephen A OPH
211 North Meramec
St. Louis, MO 63105
314-863-4200
Weyerich, Noel F IM
621 S New Ballas Rd
St Louis, MO 63141
314-432-4415
Weyman, Philip J P
St. Lukes Hospital Radiology
232 S. Woods Mill Rd.
Chesterfield, MO 63017
314-434-1500
White, Bruce I PS
456 N New Ballas Rd #211
St. Louis, MO 63141
314-569-2030
White, Newton B ORS
10004 Kennerly Rd.
Suite 162B
St Louis, MO 63128
314-849-4800

Whitener, Miles C IM
3015 N. Ballas
St Louis, MO 63131
314-569-5335
Whiteside, Leo A ORS
3165 McKelvey #100
Bridgeton, MO 63044
314-291-7161

---

*Doctor of osteopathy.

Whiting, Richard B IM
6400 Clayton
St. Louis, MO 63117
314-647-7003
Whittico, James M GS
2715 Union Blvd
St Louis, MO 63113
314-382-7500
Wiant, James R PUD
621 S New Ballas Rd #3005
St Louis, MO 63141
314-569-6107
Wice, Martin B PM
615 S. New Ballas Road
St. Louis, MO 63141
314-569-6945
Wiegand, Herbert C IM
4989 Barnes Plaza #3102
St Louis, MO 63110
314-361-7660
Wiele, Kimberly N R
639 Newport
Webster Groves, MO 63119
Wiener, Jonathan I R
510 S. Kingshighway
St. Louis, MO 63110
Wienke, Eugene C CLP
795 Office Parkway
St. Louis, MO 63131
314-822-7279
Wilbois, Ronald P OBG
3009 North Ballas Rd #208
St Louis, MO 63131
314-872-9200
Wilkinson, David NS
10007 Kennerly Rd
St Louis, MO 63128
314-843-0122
Williams, Carol F GYN
950 Francis Pl.
Suite 303
St Louis, MO 63105
314-725-0511
Williams, George A IM
915 N. Grand Ave.
St. Louis, MO 63106
314-289-6329
Williams, Joseph ORS
621 S New Ballas Rd.
Suite 101
St.louis, MO 63141
314-567-0600
Williams, Paul A FP
4488 Forest Park Blvd.
St. Louis, MO 63108
Williams, R. Jerome Sr. IM
3409 N Union
St Louis, MO 63115
314-261-4834
Williams, Roy J Jr. IM
5221 Westminster Pl
St. Louis, MO 63108
314-454-1059
Williamson, Walter E OM
514 Hillcrest Circle
Bridgeport, VA 26330
Willis, H. Robert EM
646 N. Kirkwood
St Louis, MO 63122
314-724-2810
Willman, Vallee L GS
1325 S. Grand Blvd.
St Louis, MO 63104
314-771-7600
Wilucki, Melvin R GP
6455 Westway Rd.
St Louis, MO 63109
314-631-7113
Wimmer, Warren J PD
3220 Parker Rd
Florissant, MO 63033
314-921-4500
Windsor, Chas E OPH
621 S New Ballas Rd #5108
St Louis, MO 63141
314-567-5602
Winer, Michael H ORS
3009 N. Ballas Rd. #141
St Louis, MO 63131
314-432-7622
Winter, John H IM
3394 McKevey Rd
Bridgeton, MO 63044
314-739-5070
Winter, Tyrus D OBG
100 N Euclid #303
St Louis, MO 63108
314-361-6633
Winters, Kathleen PD
100 North Euclid #6
St Louis, MO 63108
314-361-6700
Winthrop, James D DR
7002 Cameo Dr. SW
Tacoma, WA 98498
314-821-7634
Wissner, Seth E OBG
9147 Watson Road
St. Louis, MO 63126
Withrow, Donald CLP
11636 Administration Dr.
St Louis, MO 63146
314-567-3905
Witt, Clyde M R
527 Meadow Creek Lane
St Louis, MO 63122
Witt, Frederick W P
755 S. New Ballas Rd. #150
St. Louis, MO 63141
Wittgen, Edward M ORS
6400 Clayton Suite 302
St. Louis, MO 63117
314-647-8562
Wittler, Harry A GS
325 N Kirkwood Rd #302
St. Louis, MO 63122
314-821-6162
Wolfe, Edward M D
3009 N. Ballas Rd.
St Louis, MO 63131
314-432-8199
Wolff, Dolores P AN
2306 LeLand Ridge Walk
St. Louis, MO 63131
314-569-2030
Wolff, Gerald A IM
4989 Barnes Hosp Plaza
# 4103
St Louis, MO 63110
314-367-2400
Wolff, Harold D P
522 N. New Ballas #136
St. Louis, MO 63141
314-569-1717
Wolff, Ray J P
12255 DePaul Dr. #700
Bridgeton, MO 63044
Wolfgram, Edwin D P
4500 W Pine Blvd
St Louis, MO 63108
314-367-1944
Won, Russell GP
3825 S. Kingshighway
St. Louis, MO 63109
314-352-7003
Wood, John A A
224 S. Woods Mill Pd.
Chesterfield, MO 63017
314-878-6260
Woodard, Chris O IM
8131 Roxburgh Apt 1-West
St. Louis, MO 63105
314-726-1179
Woods, David A OPH
3655 Vista Ave
St. Louis, MO 63110
314-577-6038
Woods, John J Jr. GS
621 South New Ballas #307
St. Louis, MO 63141
314-567-6666
Wool, Gerald PD
8025 Dale
St Louis, MO 63117
314-644-2566
Woolsey, Joyce E PD
3 Briarcliff St.
St. Louis, MO 63124
Woolsey, Robt M N
3 Briarcliff
St Louis, MO 63124
314-771-7600
Wotawa, Wm. J OBG
3804 Wilmington Ave
St Louis, MO 63116
314-481-7224
Wright, Jeffrey M IM
522 North New Ballas Rd.
#122
St. Louis, MO 63141
314-569-1881
Wulff, Geo J OBG
120 Camelot Dr
Tavernier, FL 33070
Wurr, Dieter H FP
Arnold Med Ctr Box 99
Arnold, MO 63010
314-296-5464
Yang, Chao Yung AN
6420 Clayton Rd.
St. Louis, MO 63117
314-768-8000
Yannakakis, John E OBG
1245 Graham
Florissant, MO 63031
314-831-6517
Yanover, Robert A N
1301 Boonslick Rd.
St. Charles, MO 63301
314-878-1110
Yanow, Mitchell OBG
621 S. New Ballas Rd.
Suite 4005
St. Louis, MO 63141
Yap, Mardonio J GS
493 Rue St Francois
Florissant, MO 63031
314-831-0077
Yasin, Fazle M P
11709 Old Ballas Rd.
St. Louis, MO 63141
314-993-8950
Yates, Darrel W DR
3009 N. Ballas Ste 131
St Louis, MO 63131
314-432-5284
Yazdi, Tom M OPG
9147 Watson Road
Crestwood, MO 63126
314-352-6969
Ylagan, Amando Jr. GS
3510 Gravois
St. Louis, MO 63108
314-771-9196
Yontz, David L FP
8182 Maryland Ave. Suite 301
Clayton, MO 63105
314-726-7880
Yoon, Kong-Woo NS
3635 Vista Ave. at Grand
St. Louis, MO 63110
314-577-8847
Yoselevsky, Robert OPH
621 S. New Ballas Rd. #5006
St. Louis, MO 63141
314-432-5478
Young, Paul H NS
1416 S. Big Bend Blvd.
St. Louis, MO 63117
314-544-3433
Young, Robert A GS
224 S. Woods Mill Road
530 South Bldg.
Chesterfield, MO 63017
314-569-2030
Young, Vernon L PS
4960 Audubon
St. Louis, MO 63110
314-362-7390
Younger, Anita C GP
3814 Ballantrae Drive
Sarasota, FL 33583
Younger, Ernest GP
3614 Ballantrae Drive
Sarasota, FL 33583
Zeffren, Joel L IM
2428 Woodson Road
St. Louis, MO 63114
Zehnder, Kenneth W ORS
6400 Clayton Rd. #302
St. Louis, MO 63117
314-647-8562
Zeigler, Jos M R
1840 Woodtin Ct.
St Louis, MO 63122
314-865-3333
Zekert, Horst IM
Gen American Natl Ser Ctr
P. O. Box 14490
St. Louis, MO 63178
314-525-5218
Zia, Rashid P
12255 DePaul Drive #330
Bridgeton, MO 63044
314-291-2500
Ziegler, Robert E IM
7511 Big Bend Boulevard
St. Louis, MO 63119
314-962-4511
Zimmerman, Herbert B IM
456 N. New Ballas
Suite 299
St Louis, MO 63141
314-569-1090
Zingale, Frank G U
13730 Aleppo Dr.
Sun City, MO 85375
314-351-0155
Zivnuska, Frederick R TR
801 E. Ravine
Bayside, WI 53217
Zografakis, Geo H PS
4949 Barnes Hospital Plaza
Suite 1741B
St Louis, MO 63110
314-361-3612
Zotos, Veronica D PTH
10010 Kennerly Rd.
St. Louis, MO 63128
314-525-1144
Zukowski, Edward T R
88 River Bend Dr.
Chesterfield, MO 63017
314-781-1103
Zylka, John M IM
452 Gray Ave..
St. Louis, MO 63119
314-962-2525

---

*Doctor of osteopathy.

195—ST. LOUIS-RESIDENTS

Bellus, Gary A PD
8813 Wrenwood Lane
Brentwood, MO 63144
314-963-1225
Dovre, Erik J OBG
6302 N. Rosebury Ave. #3-W
St. Louis, MO 63105
314-862-1257
Freeman, Mark E P
750 Florence Ave.
St. Louis, MO 63119
913-236-4883
Hazen, Jacalyn E PD
318 S. Hanley #2N
St. Louis, MO 63105
314-725-7843
Leiferman, James G PD
8255 Delmar Blvd.
University City, MO 63124
Lundgren, Craig H IM
7520 York Dr. Apt 2SW
Clayton, MO 63105
314-726-5764
Mardiney, Michael III IM
4615 Lindell
President Apt. #703
St. Louis, MO 63108
Morrison, Howard IM
525 Clara Ave. Apt 101
St. Louis, MO 63112
314-361-8388
Rodgers, Nancy T IM
4320 Laclede Ave.
St. Louis, MO 63108
314-533-0253
Rossiter, Thomas W OS
9 G San Miguel Dr.
St. Charles, MO 63303
314-947-4012
Saboeiro, Gregory R R
1747 Canary Cove
St. Louis, MO 63144
314-968-3680
Siegfried, Carla J IM
5316 Pershing Apt 308
St. Louis, MO 63112
913-677-3144
Sparagana, Steven P PD
10317 Sannois #6
St. Louis, MO 63146
314-432-1994
Trachtenberg, Jeffrey D GS
40 N. Kingshighway
St. Louis, MO 63108
314-367-8418

198—SALINE

Baik, Kenneth Y GS
917 South Odell
Marshall, MO 65340
816-886-9644
Blalock, Robt W IM
370 S Odell St
Marshall, MO 65340
816-886-3366
Butner, Michael R FP
370 S Odell
Marshall, MO 65340
816-886-3565
Hamid, Rashid S FP
107 E. Vine
Brunswick, MO 65236
816-548-3021
Knipschild, Bedford F GP
370 S Odell St
Marshall, MO 65340
816-886-3366
Lawrence, John R GP
Professional Bldg
Arrow Rock, MO 65320
816-837-3430
Papreck, K T FP
370 S Odell
Marshall, MO 65340
816-886-3366
Raynor, Richard C GP
370 S Odell
Marshall, MO 65340
816-886-3366
Roehrs, Marvin E GP
370 S Odell St
Marshall, MO 65340
816-886-3366
Uhrig, Jack R IM
O'Dell Avenue Clinic
370 South O'Dell
Marshall, MO 65340
816-886-3366

202—SEMO

Adams, Mark A ORS
1012 North Main Street
Sikeston, MO 63801
314-471-0330
Ahlvin, Robt C PTH
Delta Community Hospital
Sikeston, MO 63801
314-471-1600
Askew, John H FP
1012 N Main Street
Sikeston, MO 63801
314-471-0330
Baker, Gary E PD
1012 N. Main
Sikeston, MO 63801
314-471-0330
Bell, Michael F GS
1012 N. Main
Sikeston, MO 63801
314-471-0330
Bowers, Gregory R AN
MDMC 1008 N. Main
Sikeston, MO 63801
314-461-1600
Bruce, Leo A OPH
808 E Wakefield
Sikeston, MO 63801
314-471-3358
Campbell, James W GP
Advance, MO 63730
314-722-5173
314-722-5173
Cento, Donald PTH
Mo. Delta Community Hosp.
Sikeston, MO 63801
314-471-1600
Chouinard, Michael P IM
1012 N Main St
Sikeston, MO 63801
314-471-0330
Colbert, Robt S R
108 Salcedo Road
Sikeston, MO 63801
314-471-1600
Comeau, Richard J GP
W Grant-Catalpa Sts
Dexter, MO 63841
314-624-3137
Critchlow, Wm C FP
P. O. Box 1068
Sikeston, MO 63801
314-471-0330
Dempsey, Kenneth J D
1012 N. Main
Sikeston, MO 63801
314-471-0330
Felker, C. Edward III CTC
1118 N. Main
Sikeston, MO 63801
314-471-6992
Frazier, Robt L FP
110 Dudley Dr
Sikeston, MO 63801
314-471-1600
Harrison, Thomas J Jr. PD
1012 N. Main St.
Sikeston, MO 63801
Heath, Jimmy D GP
320 N Lincoln
P. O. Box 38
East Prairie, MO 63845
314-649-3026
Heeb, Max A GS
1012 N Main St
Sikeston, MO 63801
314-471-0330
Hill, Ronald T GS
1300 N. One Mile Rd., Ste. 5
Dexter, MO 63841
314-624-8917
Ho, Grinny H OBG
808 E Wakefield St
Sikeston, MO 63801
314-471-7555
Jones, Stanley G Jr. FP
1012 N. Main
Sikeston, MO 63801
314-471-0330
Levie, Benton B PD
1012 N. Main
Sikeston, MO 63801
314-741-0330
Mahboubi, Aziz O U
P. O. Box 653
Sikeston, MO 63801
314-471-6682
McGraw, John J ORS
1012 North Main
Sikeston, MO 63801
314-471-0330
Miller, William D GP
Hwy 114 W. Box 519
Dexter, MO 63841
314-624-4591
Page, Jesse W IM
1012 N Main St
Sikeston, MO 63801
314-471-0330
Pfefferkorn, David A IM
1012 N Main
Sikeston, MO 63801
314-471-0330
Poole, Anthony G OBG
1012 N. Main
Sikeston, MO 63801
314-471-0330
Rezvani, Laghaieh R
101 Meadowbrook
Sikeston, MO 63801
314-472-2033
Rodriguez, Gregorio L GS
P O Box 394
Charleston, MO 63834
314-683-6066
Sargent, Alden P GP
808 E Wakefield
Sikeston, MO 63801
314-471-4314
Shell, William C GE
1012 N Main
Sikeston, MO 63801
314-471-0330
Tellow, Riyadh J N
741 N. Main
Sikeston, MO 63801
314-472-1321
Thornton, Fred H GS
1012 N Main St
Sikeston, MO 63801
314-471-0330
Walton, J. Douglas FP
1012 N Main
Sikeston, MO 63801
314-471-0330
Waltrip, Roy T FP
307 W Malone
Sikeston, MO 63801
314-471-4510

206—SOUTH CENTRAL

Barbe, David O FP
120 West 16th Street
Mountain Grove, MO 65711
417-926-6111
Chern, Mou S IM
North of Junctions 5 & 14
P. O. Box 218
Ava, MO 65608
417-683-3511
Choudhury, M. Hasan GP
1330 S.Sam Houston Boulevard
Houston, MO 65483
417-967-4155
Coffee, Amos L GP
P O Box 160
Willow Springs, MO 65793
417-469-3175
Dimayuga, Nestor G FP
Mercy Hosp Tri County
Mansfield, MO 65704
417-924-3281
Dixon, Druery J FP
816 E. 2nd Street
Willow Springs, MO 65793
417-469-3116
Doherty, Daniel W OPH
1202 Kentucky
West Plains, MO 65775
417-256-4111
Dreyer, Wm F GP
1418 So Hiway 63
Houston, MO 65483
417-967-2232
Duff, William M GS
1337 South Highway 63
Houston, MO 65483
417-967-3365
Fowler, Marvin L FP
805 Kentucky Ave.
West Plains, MO 65775
417-256-2111
Gentry, Marvin C GP
Rural Route 2 Box 4
Ava, MO 65608
Hasek, James A FP
Rt 3 Box 257-A
Mountain Grove, MO 65711
417-926-3155
Hawkins, Stephen L FP1
526 Spruce
Cabool, MO 65689
417-962-3121
Hayes, Nancy J FP
600 N. Busch
Mountain Grove, MO 65711
417-926-6111
Huffman, Thos L FP
2006 Cambridge Drive
West Plains, MO 65775
417-334-2841
Kang, Young M GS
P O Box 725
214 Main St
West Plains, MO 65775
417-256-8161

---

*Doctor of osteopathy.

Mayuga, Laureano G GS
P. O. Box 499C
514 Pine
Cabool, MO 65689
417-962-4255
Moore, Michael R GP
805 Kentucky
West Plains, MO 65775
417-256-2111
Preston, Bruce E FP
805 Kentucky
West Plains, MO 65775
417-256-2111
Ray, David J U
P.O. Box A
West Plains, MO 65775
417-256-3141
Reddy, Anchala N PUD
2914 Laurie Dr.
West Plains, MO 65775
417-782-3212
Reddy, Nalini A OPH
808 Kentucky
West Plains, MO 65775
417-782-2338
Shafer, Kenneth E CD
1115 Alaska Ave., Suite 212
West Plains, MO 65775
417-256-1999
Shaw, Robert D FP
P. O. Box 148
Willow Springs, MO 65793
Smith, Claude F FP
816 East Second St
Willow Springs, MO 65793
417-469-3116
Stubbs, Thomas R GS
709 Kentucky
West Plains, MO 65775
417-256-0056
Tarneja, Kailash C DR
West Plains Mem Hospital
P.O. Box 1007
West Plains, MO 65775
Tio, Liep T TR
1115 Alaska Ave. Suite 116
West Plains, MO 65775
417-257-7080
Walker, Ambrose T FP
414 S 6th St
Thayer, MO 65791
417-264-7121
Wall, Joe A GP
107 East Pine
Houston, MO 65483
417-967-3323

208—TRI-LAKES

Chaffin, Jerald D FP
427 Cahill Rd.
Branson, MO 65616
417-334-4117
Crain, James W GS
P.O. Box 280
Branson, MO 65616
Gillispie, Jack FP
P.O. Box 1306
Branson, MO 65616
417-334-6455
Gillispie, John J IM
Branson Heights Shop Ctr
Branson, MO 65616
417-334-3179
Greenberg, Benjamin E R
Route 2, Box 1
Forsyth, MO 65653
417-334-3155
Hunsley, Perry U GS
547 N. Business Hwy 65
Branson, MO 65616
417-334-1093
Lauderdale, William H IM
P. O. Box 10 Hwy-Y
Forsyth, MO 65653
417-546-4200
Morrison, Tom V OPH
427 Cahil Rd.
Branson, MO 65616
417-344-0044
Regier, Carl M R
St. Rt. 1, Box 1356
Branson, MO 65616
417-338-2423
Shaffer, Lynn R FP
S R 2, Box 458
Branson, MO 65616
417-334-7111
Wonder, Donald GS
547 N. Business Hwy 65
Branson, MO 65616
417-334-1093
Wood, Charles E OBG
HCR 1 Box 169
Hollister, MO 65672
417-334-2224

Zeller, William M FP
P.O. Box 1306
Branson, MO 65616
417-334-6455

210—WEBSTER

Bareis, Robt J FP
Route #1 Box 2645
Marshfield, MO 65706
417-468-2339
Macdonnell, Thos M FP
Route #1 Box 2645
Marshfield, MO 65706
417-468-2339

214—WEST CENTRAL

Bever, Grant A OBG
1620 E. Elm St.
Harrisonville, MO 64701
816-524-5600
Carroll, Danny K ORS
17053 S. 71 Highway
Belton, MO 64012
816-322-0688
Dang, Robert C FP
P. O. Box 146
Pleasant Hill, MO 64080
816-987-2111
Frein, Donald E GP
501 S Lexington
Box F
Harrisonville, MO 64701
816-884-3272
Garwood, Jan D FP
900 South Adams
Nevada, MO 64772
417-667-6015
Gehm, Louis E DR
Bates County Hosp
615 Nursery
Butler, MO 64730
816-679-4135
Greenlund, Nelson C FP
Nelson Greenlund Inc.
Rt 4 Box 168
Nevada, MO 64772
417-667-6015
Harms, James F GS
900 S Adams
Nevada, MO 64772
417-667-6015
Haynie, William W GP
706 S. High
Butler, MO 64730
816-679-3118
Jones, Edward S FP
7531 W. 93rd St.
Overland Park, KS 66212
Jones, Robert R PD
900 S Adams
Nevada, MO 64772
417-667-6015
Lee, Gerald B CD
P. O. Box 6037
Kansas City, KS 66106
Long, Curtis W GP
200 W. Chestnut
Butler, MO 64730
816-679-4600
Lovinger, Warren C Jr. IM
122 W. Walnut
Nevada, MO 64772
417-667-8484
Ludwig, Lee V GS
Southland Center
1626 E. Elm
Harrisonville, MO 64701
816-887-2218
Lusk, Chas A GP
911 Country Club
Butler, MO 64730
816-679-4473
Magee, Robt L FP
808 S Main St
Eldorado Spring, MO 64744
417-876-4234
Magruder, Lyell M GP
Nevada Medical Clinic
900 S. Adams
Nevada, MO 64772
417-667-6015
Moore, Candice A GP
122 W. Walnut
Nevada, MO 64772
417-667-2054
Moore, Michael T DR
800 S. Ash
Nevada, MO 64772
417-667-3355
Morton, Wayne L FP
Box 427
Osceola, MO 64776
417-646-8123

Pearse, Roy W GP
P.O. Box 1198
Forsyth, MO 65653
Price, Richard C FP
103 S. Oriole Ave.
Harrisonville, MO 64701
816-884-3244
Rabon, Nancy A OBG
900 S. Adams
Nevada, MO 64772
Reed, Glen H GP
Appleton City, MO 64724
816-476-2121
816-476-2121
Rinck, Edward C P
900 S Ash
Nevada, MO 64772
417-667-3142
Scully, Bruce D FP
411 N. Beech
Appleton City, MO 64724
816-476-2121
Strobach, Robt L GP
706 South High St.
Butler, MO 64730
816-679-3118
Suwanabhand, Chalaw IM
200 West Chestnut
Butler, MO 64730
816-679-3149
Thies, Jerome H FP
Tri-County Clinic
Osceola, MO 64776
417-646-8153
Thompson, Frederick L FP
900 S Adams
Nevada, MO 64772
417-667-6015
Torontow, Raphael J IM
900 S. Adams
Nevada, MO 64772
417-667-6015
Turner, William A GS
900 S. Adams
Nevada, MO 64772
417-667-6015
Van Zanten, Niko A FP
Box 421
Osceola, MO 64776
417-646-8123
Wheeler, Robt L FP
103 S. Oriole Ave.
Harrisonville, MO 64701
816-884-3244

216—ST. LOUIS UNIVERSITY

Carole Anderson
Donna M. Andres
Todd Andrews
Nancy M. Angenend Serrot
Kenneth A. Ashton
Mary Jo Babka
Darlene E. Bangert
Michael D. Barnum
Sherri Barrett
David K. Beato
Jay C. Beiswanger
Donald R. Bennett
Ed Bertaccini
Lane R. Bigler
William J. Blanke
Rick Bowen
Marc Bracy
Stephen Brennan
Bryan J. Brindley
James B. Brown Jr.
Mark Burnes
Gunhilde M. Buschsbaum
Rosemary Cannistraro
Steven J. Carabine
Bruce R. Chandler
Grace H. Cheng
Eric S. Colton
Chris Conlin
Daniel C. Cook
Johnnie V. Cook
Adrian M. Cordoba
Mark A. Cunningham
Perrin Curran
Janelle A. Czajkowski
Paul Dabrowski
Margaret J. David
Martin A. Docherty
Robert Dong
William G. Doubek
Christy Drivdahl
Francis A. Dysarz III
Kevin W. Eggerman
Sara Ehlke-Bejcek
Randall Fenton
Cheryl Y. Fleischman-Bruce
Julia Fong
Jeffrey E. Ford
Andrew Fragen
Barney Fritz
Kent J. Funk
Corrine M. Gallagher

---

*Doctor of osteopathy.

Jacqueline M. Garrard
James M. Gerard
Scott A. Goodson
Steven J. Granberg
Anita K. Gregory
Gil Gross
Ruth P. Gullotta
Michele M. Haag
Ramzi Hajjar
Barry Handler
Kristin L. Hanson
Marcel E. Haulard
Kristina Henderson
Richard P. Hermann
Thomas F. Heston
Klaus A. Hilgarth
Eleanor Ho
Liza Icayan
John W. Jaurequito
David Joyce
Doug Kartel
David A. Katzman
Afshin Khatibi
Jeannette Kierce
Kent L. Killian
Daniel J. Kirse
Deborah A. Konkol
Andrew J. Koropey
John J. Kownacki
Joan Kramer
Tom R. Latendresse
Florence Leung
David Lingle
Mark Littlehale
John Lolie
Gerald A. Maguire
Mina Majidian
Gina M. Maminta
Peter A. Marco
Judson F. Martin
Mary C. Maton
Carole Matteri
Ron McCann
Michael McDonough
Kiren Mehra
Stephen Miller
Kevin T. Minnihan
Gregory Morse
Gerhard Muelheims Jr.
Cynthia J. Mueller
Robert M. Nee
John Pantano
John E. Parsons
Lucinda Pascale
Carla S. Paul
J. Brent Pawlecki
Michael J. Pearce
Angela L. Piquard
Donald A. Reinke
John P. Rioux
Steven Ritter
Donna Robey
Jason Rohrer
Donna Roth
Trent Russell
Somchai Saelee
Greg Sater
Stephen D. Schmidt
Edmund L. Schmulbach
Ann M. Schneider
Sara Schweigert
Jamie K. Scott
Terrell L. Sellers
Margaret J. Slover
Sybil C. Smith
Timothy R. Soncasie
Joseph L. Staggenborg
Michael D. Starbuck
Jordan B. Sterns
Lee Jayson Stone
A. Joseph Tector
Paula Termuhlen
Derek Towery
Mike Tran
Mickey M. Tseng
Stuart K. Wakatsuki
Robert W. Weber
Phillip R. Wells
Bruce Whitehead
Catherine Wittgen
Samuel Yanofsky
Larry Yin
Mary C. Younglove
Andrea P. Zaman
Paul B. Zanaboni

218—UNIVERSITY OF MISSOURI-COLUMBIA

Stephen R. Adams
Rifat S. Akhtar
Thomas J. Alcox
Julie A. Alford
Karie F. Andersen
David R. Andes
Andrea A. Arvan
Lorie M. Austin
Kelly J. Bain
Patricia Barker
David L. Barnes Jr.
Laurie A. Barozinsky
Michael J. Bateman
David Beckemeier
Bruce G. Bellamy
Varsha Bhatt
James R. Biddle
Susan C. Birmingham
James J. Borders
Marcella R. Bothwell
Robert S. Bridge
Mark R. Briesacher
Cynthia K. Briggs
Andrew W. Brown
Steven A. Carder
Michael J. Carney
Aaron B. Carter
William A. Cass
Lilibeth P. Cayabyab
Wai E. Chiu
Jonathan L. Clark
Nancy L. Clore
J. Dewey Cooper
V. Kent Cooper
Mark R. Corkins
James G. Corwin
Kurt S. Cox
Mark T. Cox
Stefan B. Craig
Lynn M. Daniels
Amy K. Davis
Thomas E. Davis
K. Rachelle Derrough
Deann E. DeWitt
Frank A. Divincenzo
Michelle F. Dolgin
Scott C. Dulebohn
Jennifer A. Dye
Mark C. Eddy
James T. Elliott
Steve A. Ellis
Patrick K. Ellison
Thomas F. Essman
Laurie S. Evans
Maria L. Evans
Christine R. Faser
Louis R. Feldenberg
Robia A. Fields
Bev J. Fingerhood
Mary Jo Fisher
Rebecca J. Flanagan
Brian Foley
Robert F. Fraser II
Mark Freter
Santosh George
Sharon M. George
K. Douglas Green
Timothy A. Hall
Joel D. Hassien
Carolyn S. Hathaway
Sanjay K. Havaldar
Curtis L. Hedberg
M. Kathlyne Heilman
Robert E. Henson II
Brenda A. Hettinger
Neal A. Honickman
Stephen H. Hooper
Barbara J. Houk
Scott Howe
William S. Hughes
David R. Hunter
Jeff Jenkins
Janet E. Johnson
Cynthia D. Jones
Justin E. Jones
Matthew Jung
Lisa M. Jungkuntz
Anthony T. Kaczmarek
Charles E. Keeney Jr.
Thomas S. Kiser
Michael R. Lasky
Randall C. Latorre
Stanley L. Librach
Paul I. Lindner
David C. Lowe
James A. Lund
Timothy P. Manson
Stephen J. Martin
Bridget McCandless
Robert F. Merritt
Joseph V. Meyer
Keith A. Meyer
Lora A. Mills
Peter Montgomery
Kimberly D. Morris
Kristin A. Morse
Peggy A. Murphy
Stephen W. Nagy
Bert L. O'Neal
Christopher M. Oermann
Alina Ostrovskaya
Amy J. Owen
Katherine E. Parkinson
Karuna Patibandla
Jeffrey L. Patrick
Robert L. Peskind
Kenneth G. Petty
Mark A. Pfitzner
Lora J. Plattner
Henry A. Pool
Troy D. Potter
Jeff Reed
Julie L. Peihsen
Jonathan W. Richardson
Richard T. Riegel
Jeffrey A. Riesman
Bradley D. Robison
William E. Roland
Laura A. Rosenberger
Brian Q. Rudman
Stephen J. Ryan
Thomas E. Saak
Francis P. Sajben
John Saunders
Catherine A. Schnell
Morris H. Seligman
Philip Severin III
Robert B. Sexe
Michael J. Shanker
Teena L. Sharrock
Mako Shimoda
Dan M. Silverstein
Connie D. Simmons
Sam R. Simms
Luke B. Sloan
Kim K. Smith
Lori J. Smith
Patricia A. Smith
D. Scott Smithpeter
Julie D. Stansfield
Melissa A. Stapp
Julaine Stiers
Mary A. Struckhoff
Leigh A. Sulzberger
Bobby O. Tackitt II
Jane E. Taylor
Sarvam P. Terkonda
Cyd C. Thomas
Lisa A. Thomas
Jerome E. Thurman
Brian D. Toalson
Sarah G. Tuli
Jamie G. Ulbrich
James T. Vandenberg
Marc Vanderslice
Michael J. Wackowski Jr.
Mary A. Wardell
Kendall C. Warden
Rebecca S. Watt
Karen L. Weismantle
Kaoru Williams
Scott G. Williams
Stephanie E. Womack
Clinton R. Wright
Thomas F. Wright
Dennis E. Younglove
Geoffrey J. Yule
John A. Zimmerschied
Darryl T. Zinck

220—UNIVERSITY OF MISSOURI-KANSAS CITY

Manal Abdelmalek
Ann C. Agnew
Timothy Albers
Shilpa S. Amin
Joseph C. Apostol
Sujatha R. Ayyagari
Dana S. Bacon
Michael J. Bamshad
Sandra D. Barnes
Monica Bashamdu
Richard L. Baumann Jr.
Marjorie M. Beebe
Cynthia T. Bernabe
Robert Boulware
Christine M. Boutwell
Richard J. Brooks
Lisa L. Buchheit
Barbara A. Bumberry
James S. Burke Jr.
Charles F. Carey
Laura C. Carlson
Jodianne T. Carter
Terrence W. Carver
Christina M. Casteel
Jerome Castro
Leway Chen
Jackie Cheng
Julie Choi
Alice H. Chou
Geemee Chung
Lin W. Clark
Kevin A. Coleman
Scott Crader
Charles T. Cunningham
Thomas D. Demark
William D. DePond
Mark L. Dick
Jose M. Dominguez
Gerianne E. Dudley
Scot W. Ebbinghaus
Susan J. Ebbinghaus
Robert J. Ellis
Christine Esswein

---

*Doctor of osteopathy

Thomas H. Faerber
Grace Y. Fan
Mary H. Feth
Shawna A. Flanagan
Elizabeth P. Ford
Lance C. Foster
Satyajeet Y. Gaekwad
Scott A. Gard
Robert E. Garmon
Lisa C. Gennari
Stephanie Gillard
Max J. Glaser
Robert E. Golder
Ajay Goyal
Christine M. Gregory
Patrick D. Griffith
Carri Beth Grimes
Ganesh Gupta
Steven C. Hannah
Amy K. Hara
Taz J. Harmon
Edward J. Hauptmann
Lori A. Hermandorfer
Christina Y.F. Ho
Robert P. Holloway
Douglas E. Homoky
Jennifer Horrell
Alina E. Huang
Heather K. Isom
Michael R.K. Jacoby
Dawn H. Jones
Ann M. Karty
Cindy D. Kilburn
Joo Hoon Kim
Derik King
Debra J. Klearman
Shakuntala Kothari
Julie Lafferty
Kathryn Lane
Timothy S. Lee
Michelle R. Lemberger
Laury L. Lemons
Jacqueline M. Levy
Doug Linville
Debra L. Luben
Anne Lyng
Mark S. McAllister
Brian P. McNally
Sacheen H. Mehta
Shawn C. Merys
Blaine E. Messing
David G. Milder
Alan B. Miller
Stephanie A. Miller
Kathleen T. Mitchell
Elizabeth A. Mullans
Annamaria Nagy
Quang T. Nguyen
Tri Nguyen
David T. Nill
Ann Norland
Sandra A. Onder-Sieck
Warren A. Ong
Heather Ownby
Sam L. Page Jr.
Eric J. Pappert
John R. Parker
Sandy Patel
Gregroy T. Penny
Lynn Petty
Terri L. Prichard
Sanjay Ramakumar
Carlin A. Ridpath
Robin L. Rinehart
Michelle R. Rumpf
Hugh H. Ryan II
Janice L. Ryan
Jerome S. Schroeder
Ira C. Singhal
Richard L. Smith
Stephanie A. Smith
Michael G. Smock
Joe E. Snodgrass
Charisse A. Soracco
Janice M. Spears
Patricia A. Spilker
Catherine Y. Spong
Thomas M. Stanfield
Belinda Sun
Tony Sun
Matthew B. Sutton
Nasreen A. Syed
Deborah A. Thomas
Jose R. Thomas
Philip Tippen
Luan V. Tran
David W. Tsai
Bradley Umbarger
Jerome C. Vallez
Ronald L. Vance
Diane S. Voss
Hao N. Wang
Jining Wang
Suzanne H. Wegener
Christopher J. Westerheide
Eden Wheeler
Derek Williams
Rodney K. Woerther
Nadia Wolkow-Krupnikova
Julie Woodbury
Monte Wu

222—WASHINGTON UNIVERSITY

Rebecca Aft
Carlos G. Arcangeli
William L. Becker
Jonathan D. Boniuk
Jeff Boris
Bruce M. Brenner
Diana Chen
JoAnn Connors
Richard A. Cordle
Devnandini Cruz
Angela M. DeMichele
J. Kevin Donahue
Daniel J. Donovan
Thomas J. Ferrer
Kathleen M. Finan
Stephen M. Foster
Francisco J. Garcia-Ferrer
Ahmed Ghouri
Ashok V. Gokhale
Carlen A. Gomez
Douglas S. Gorman
Norman W. Gross
Gary C. Harrington
Mark A. Hassen
Russell L. Holman
Neil R. Horning
Daniel M. Ihnat
Stephen C. Ingels
Pachavit Kasemsap
Brian Kolar
John O. Krause
Marcella Kuhlman
James Z. Lai
Mary S. Landry
Matthew R. Leibowitz
Mark E. Leimbach
Armond L. Levy
Adam T. Lottick
Mark J. Lucarelli
Robyn E. McCarty
Janet G. McGhee
Jerome A. McTague
Mary Morgan
Jonathan Morris
Nina Mutone
Kim D. Pendleton
Chandra N. Prasad
Stephen M. Pustilnik
Robert C. Quackenbush
Denise M. Rankin
Steven D. Rettinger
Caroline Rowlands
Evan K. Saunders
Michele D. Semin
Pearl F. Serota
Robert B. Shibuya
John C. Shin
Robert L. Soares Jr.
Christopher M. Speidel
Jim Stevermer
Robert G. Swanson
Ivan Tarle
Stephen G. Terrill
Craig Treptow
Scott S. Tykodi
Clifford K. Weber
Kenneth H. Wong
Anthony M. Zelazny

---

*Doctor of osteopathy.

ARE YOU READY FOR ACLS?

If you are a physician, nurse or paramedic, you probably do not have 16-20 hours to spend on classroom preparation for certification or recertification in Advanced Cardiac Life Support. No longer is it necessary for you to adjust your schedule to a classroom time.

Available for the first time is a comprehensive ACLS preparatory course designed for home study.

This videotape series includes discussions by experts regarding EKG, pharmacology, acid-base, and more. Demonstrations on airway and basic life support techniques are thoroughly covered. The series will also prepare you for a Mega Code situation.

To find out more about this program call 1-800-359-0840.

60
40
20
0
150
100
50
0
300
200
100
0

ADVANCED CARDIAC LIFE SUPPORT
A PREPARATORY COURSE
TRAINING PRODUCTIONS, INC., P.O. BOX 29470, SHREVEPORT, LOUISIANA 71149-9470, TELEPHONE (318) 687-2740

Are You Up for an Adventure?

INTRAV and **MSMA** offer you the chance to see the world!

Take advantage of the traveling medical seminars offered by **INTRAV.** Offered to all Members, Families and Friends of the Missouri State Medical Association. See incredible sights and gain valuable medical information at the same time while traveling by boat, plane or train throughout the world! Trips available:

Wings Over the Nile — October 27 - November 9, 1989
Wings Over Kenya — Departs February 9, 1990
Thailand, Nepal and India — Departs March 24, 1990

For more information, write:
Missouri State Medical Association
ATTN: Mary Wiegers
P.O. Box 1028
Jefferson City, MO 65102
Or phone: 314/636-5151

Don't miss out — Call today!

MISSOURI
DAW
MD
DISPENSE AS WRITTEN

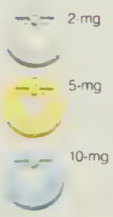
The practice is yours.
The patients are yours.
The prescriptions are yours.

Make the prescribing decision yours, too.

Sign on the right on
the "Dispense as written" line.

Specify VALIUM®
brand of
diazepam/Roche Ⓘⓥ

The cut out "V" design is a registered trademark of Roche Products Inc


2-mg
5-mg
10-mg

scored tablets

The one you know best.

Copyright © 1988 by Roche Products Inc
All rights reserved

ROCHE Roche Products
Roche Products Inc
Manati, Puerto Rico 00701

AXID®

nizatidine

Enhances compliance and convenience

Patients appreciate Axid, 300 mg, in the Convenience Pak

In a Convenience Pak survey (N = 100)[1]

- 100% said the directions on the Convenience Pak were clear and easy to understand
- 93% reported not missing any doses

Pharmacists save time - at no extra cost

- The Convenience Pak saves dispensing time and minimizes handling

The Convenience Pak promotes patient counseling

- Pharmacists dispensing the Axid Convenience Pak can encourage compliance and continued customer satisfaction

Once nightly
Convenience Pak
AXID
nizatidine capsules
300 mg
Once nightly
Convenience Pak
AXID
nizatidine capsules
150 mg
Lilly

Convenience Pak is available at no extra cost

Lilly

Eli Lilly and Company
Indianapolis, Indiana
46285

AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer In most patients, the ulcer will heal within four weeks

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h.s after healing of an active duodenal ulcer The consequences of continuous therapy with Axid for longer than one year are not known

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General* — 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2 Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3 Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine

Drug Interactions — No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations Caution should be exercised when administering nizatidine to a nursing mother

Pediatric Use — Safety and effectiveness in children have not been established

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo Rare reports of gynecomastia occurred

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs Rare cases of thrombocytopenic purpura have been reported.

Integumental — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients Rash and exfoliative dermatitis were also reported

Hypersensitivity — As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

---

[1] Data on file, Lilly Research Laboratories.

NZ-2907-B-949310 © 1989, ELI LILLY AND COMPANY

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

August

1 - 4 **3rd Combined Clinical Conference on Emergency Care** — Location: Marriott's Tan-Tar-A Resort, Osage Beach, Lake of the Ozarks. Contact: Dean Nierling, M.D., F.A.C.E.P., University of Missouri Hospital and Clinics, Columbia, MO 65212. 314/882-8091.

4 **Common Skin Problems** — Location: Research Medical Center, Kansas City, MO. Contact: Robert E. Gunnoe, M.D., Program Coordinator, Research Medical Center, The Ed Bixby Institute for Postgraduate Medical Education, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

6 - 20 **Traditional and Modern Health Care in Kenya** — Location: Travel Program to East Africa. Contact: Irene Kalnins, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8919.

7 - 9 **The World Congress on Health** — Location: Beijing, People's Republic of China. Contact: Kenneth A. Garceau, International Secretariat, Dwight D. Eisenhower Building, Spokane, WA 99202. 1-800-876-1289. FAX: 509-534-5245. Telex: 326328 PTP SPK.

11 **Nd: YAG Laser Resectoscope Hysteroscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

16 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

25 -26 **CO_2 - Nd:YAG Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

September

11 - 13 **Treatment of Destructive Behaviors in Persons With Developmental Disabilities** — Location: Masur Auditorium, Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, MD. Contact: Barbara McChesney, Prospect Associates, Suite 500, 1801 Rockville Pike, Rockville, MD 20852. 301/468-6555.

13 - 14 **Eighth Annual Symposium on Geriatrics and Gerontology** — Location: Clarion Hotel, St. Louis, MO. Contact: Diane Coibion, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/894-6510.

13 - 14 **Care of the Aged: Applications of Health Services Research** — Location: Clarion Hotel, St. Louis, MO. Contact: Conference Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

20 **Female Incontinence** — Location: Breckenridge Inn Frontenac, St. Louis, MO. Contact: Irene Kalnins, St. Louis University School of Medicine, CME Office, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

21 **Oncology Update: Malignant Melanoma** — Location: St. Luke's Hospital Institute for Health Education, Emerson Auditorium, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/851-6006.

22 - 23 **1st Annual Update Course in Ophthalmology** — Location: Washington University School of Medicine, St. Louis, MO. Contact: Kathy Ryan, Box 8096, 660 S. Euclid Ave., St. Louis, MO 63110. 314/362-5722.

25 **Eighteenth Annual Wendell G. Scott Lecture: Pulmonary Embolism and Technology Assessment — Lessons from a Multicenter Trial.** Speaker: Dr. James H. Thrall, Harvard Medical School. Contact: Ronald G. Evans, M.D., Director, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7100.

27 **Lowering Lipids** — Location: Omni International Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402, S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

29 - 30 **Advanced Trauma Life Support Course** — Location: St. Louis, MO. Contact: Barbara Brown, Department of Surgery, St. Louis University School of Medicine, 1325 S. Grand Blvd., St. Louis, MO 63104. 314/577-8372.

October

5 - 7 **Biomedical Image Processing with Microcomputers** — Location: Marriott's Pavilion Hotel, St. Louis, MO. Contact: Loretta Giacoletto, CME Office, Washington University School of Medicine, Box 8063, S. Euclid, St. Louis, MO 63110. 314/362-6891.

6 - 8 **Ozark Chest Conference: Lung & Heart/Lung Transplantation** — Location: Tan-Tar-A, Lake Ozark, MO. Contact: American Lung Association of Eastern Missouri, 1118 Hampton Avenue, St. Louis, MO 63139-3196. 314/645-5505.

9 - 10 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

18 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

20 - 21 **Third Annual Symposium and Workshop on Operative Laparoscopy, Pelviscopic Surgery and Laser Endoscopy** — "Advances, Complications and Controversies" — Location: St. Luke's Hospital, Chesterfield, MO. Contact: Patty Fogerty, Program Coordinator, Department of Education, St. Luke's Hospital Institute for Health Education, 222 South Woods Mill Road, Suite 350 North, St. Louis, MO 63017. 314/851-6006.

25 - 29 Ethical Choices in the Age of Pervasive Technology — A World Conference — Location: University of Guelph, Ontario, Canada. Contact: Brian Segal, President, Division of Continuing Education, Room 160, Johnston Hall, University of Guelph, Guelph, Ontario, Canada N1G 2W1. 519/824-4120, ext. 3956 or 519/824-4747, ext. 3957. FAX 519/767-0758.

November

2 - 3 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

2 - 4 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis MO. Contact: Virgina Eason, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

10 - 11 **Nd:YAG Operative Hysteroscopy/Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

10 - 12 **Sixteenth Annual Symposium: Anesthesia and The Geriatric Patient** — Location: The Marriott Pavilion Hotel, One Broadway, St. Louis, MO. Contact: Geriatric Symposium, Dept. of Anesthesiology, Box 8054, Washington University School of Medicine, 660 S. Euclid, St. Louis, MO 63310. 314/362-6973.

15 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

December

1 - 2 **17th Annual Diabetes Symposium: Current Topics in Diabetes for the Practicing Physician** — Location: Hyatt Regency, St. Louis Union Station. Contact: Jeanne Rogers, Kilo Diabetes & Vascular Disease Research Foundation, 1227 Fern Ridge Parkway, #100, St. Louis, MO 63141. 314/434-6500.

“I switched to occurrence coverage without paying for a tail.”

The Claims Made Trap. If you're caught in it, there's no easy way out. The only way to switch to occurrence, the coverage preferred by most doctors, has been to pay an expensive tail premium. Until now.

Medical Protective, the company that invented professional liability insurance 90 years ago, has a solution. Convertible Claims Made. Now you can get back to occurrence without buying a tail.

And when you choose Convertible Claims Made with Medical Protective, you not only get back on the road to occurrence, you get coverage with one of the most trusted and highly regarded professional liability carriers in America today. For the past 90 years, defending and insuring physicians, surgeons and dentists has been our only business. No one is more experienced or more committed. And our continuous A+ (Superior) rating from the A.M. Best Co. gives you the financial stability and strength that you need and expect from your professional liability carrier.

So, if you would like to escape the Claims Made Trap, look no further. Call us today and we'll show you how Convertible Claims Made makes it easy to step up to occurrence and Medical Protective.

THE
MEDICAL PROTECTIVE COMPANY

Serving Missouri Physicians Since 1910.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.,** P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

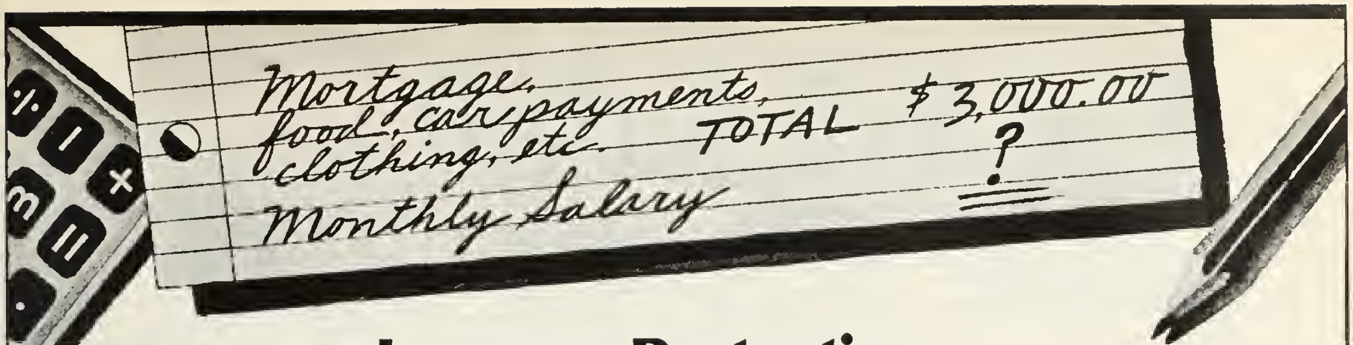
Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Army Reserve 446
Dodson Insurance 482
Eli Lilly 594
Forrest T. Jones 483
Fred S. James 599
Insurance Corporation of America 456-457
Intrav 592
Invest in Missouri Program 447
Jackson & Coker 465
Key Pharmaceuticals 465,466
Medical Defense Associates 454
Medical Protective Company 453, 597
Merck, Sharp & Dohme 603,604
MOMEDICO 442
Palisades Pharmaceuticals 519
PIE Mutual Insurance Company 600
Prudential-Bache 458
Roche 593
Risk Control Associates 460
Timberlawn 464
Training Productions 592
United Missouri Banks 444
U.S. Airforce 455
Wes Woodbury 466


Mortgage, food, car payments, clothing, etc. TOTAL $3,000.00
Monthly Salary ?

Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance programs offer you coverage and cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: **James**

FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______________________

Address ______________________

City ____________ State ____________ ZIP ____________

Phone: ( ) ____________ Best time to call: ____________

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, PIE Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality. PIE Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

Physician Managing Boards, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

Quality Rated Insurance Program: a modified claims-made plan which works in the physician's favor to reward loss-free physicians and provides added protection not available in other policies.

A Financially Sound Reinsurance Program with Lloyd's of London, the world's most prestigious reinsurer.

An Aggressive Defense Team, experienced in all types of medical liability claims and willing to fight for your cause.

Mutual Insurance Company
PIE

If your standards match ours, let's talk business.

The PIE Mutual Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth St., Cleveland, OH 44114
(216) 781-1087

SO WE CAN HOLD THE PREMIUMS DOWN.

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

Classifieds

Physicians Wanted

INTERNAL MEDICINE — SPRINGFIELD, Mo: Join 6-physician IM group; expanding practice, primary and critical care; affiliation with several major hospitals; optional teaching activities; call shared equally; competitive salary/benefit package; 230,000 metro population; CONTACT: Phil Kelbe 1-800-338-7107.

MISSOURI: Immediate opening for full-time or part-time emergency physician in 120-bed hospital in community of 10,000 in southeast Missouri. 9,000 visits annually. ACLS, ATLS required. Send CV to Comprehensive Emergency Care, Inc., P.O. Box 565, Kennett, MO 63857; 314/888-1511.

ANESTHESIOLOGIST, BC/BE, needed to join group of 4 MDs and 7 CRNAs in a modern 250-bed hospital in Kansas City. Wide variety of cases, including OH and OB. Salary leading to partnership. Contact: **M.A. Chernoff, M.D.,** 8929 Parallel Parkway, Kansas City, Kansas 66112.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

DIAGNOSTIC RADIOLOGIST — Competitive salary and early partnership. Busy practice includes 100-bed general hospital and multispecialty clinic. Competence in all modalities except MRI. Dan Sullivan, M.D., or John Morgan, M.D., 3525 S. National, Suite 110, Springfield, MO 65807.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). For information contact: Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

FAMILY PRACTICE — HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hospital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar opportunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435; 612/835-5123.**

SURGEON OPPORTUNITY. Immediate opening for general surgeon in rural Nebraska. Board certified or board eligible. Must be licensed in Nebraska. Excellent benefits. Great hunting and fishing. Wallace & Panzer, M.D., P.C., 807 N. Ash, Gordon, NE; phone 308/282-1164.

FAMILY PRACTICE/INTERNIST. Have a large solo practice in fast-growing St. Charles County, looking for partner. Close to 4 hospitals. Office space also available. Call 314/272-5454 from 1:00 p.m. to 5:00 p.m. weekdays except Wednesday. Address: 1001 Highway K, O'Fallon, Missouri 63366.

HEALTHLINE PHYSICIAN SERVICES, an affiliate of St. Louis University Medical Center, is recruiting for an Emergency Department Medical Director and Staff Physicians at Hannibal Regional; Hannibal, Missouri. Growth oriented program in historic Missouri river town. Good compensation, benefits, paid liability. Part-time/locum tenens also available. Contact William J. Salmo, HealthLine Physician Services, 3663 Lindell Blvd., Suite 410, St. Louis, Missouri 63108; 1-800-443-3901.

E.R. PHYSICIANS/PART-TIME — Liberty Healthcare Corp., a 12-year-old medical management corporation, has part-time positions available in moderate volume ERs in several facilities in the midwest. We offer competitive salary and paid malpractice. Shifts available to suit your particular schedule. We seek physicians with E.R. experience. If you are a 2nd-year EM resident, 3rd-year FP or IM resident, Liberty Healthcare can provide you with worthwhile, rewarding part-time career opportunities. For more information, call E.R. specialist, Annamarie Alleva, 1-800-331-7122 toll free or send C.V. to: **Liberty Healthcare Corp.,** Dept 0, 399 Market Street, Philadelphia, PA 19106. EOE.

FAMILY PRACTICE OPENING — Join established family practice clinic near 32-bed hospital. Competitive salary and benefits. Medical support from seven major hospitals with consultation and educational services. Family-oriented, supportive community in scenic N.E. Iowa. Contact Richard Phillips, Community Memorial Hospital, P.O. Box 519, Postville, Iowa 52162. 319/864-7431.

MISSOURI PRO SEEKS MEDICAL DIRECTOR. Position reports to Board of Directors and is responsible for administration of all PRO medical review activities statewide to ensure compliance with established objectives and contractual requirements. Duties include: supervision of physician staff, education of physicians/physician reviewers, monitoring medical review process, preparation and maintenance of physician reviewer manual, physician recruitment, meetings with groups of and individual physicians,

Physicians Wanted

serving as liaison with state and national physician organizations. Physician (M.D. or D.O.) required. Licensed, or able to be licensed, in Missouri. Experience with utilization and/or quality management, risk management, and administrative medical supervision. Considerable travel. Salary negotiable. Excellent fringes. Send resume to **MPCRF Search Committee,** 505 Hobbs Road, Suite 100, Jefferson City, MO 65109.

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

EXCELLENT OPPORTUNITY for an internist to become associated with a 13-physician multi-specialty group located in St. Charles, Missouri. St. Charles is an excellent community to raise a family, excellent school systems, easy access to the St. Louis metro area for recreation, entertainment, with a general service area potential of 120-150,000 residents. Guaranteed first year with excellent fringe benefits and an established practice. Reply to **File #25,** C/O Missouri Medicine, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

ELIGIBLE INTERNIST OR FAMILY PRACTICE physician in the ambulatory care section of a Veterans Administration Medical Center. Excellent benefits package. Contact or send CV to Stephen W. Maks, M.D., Chief of Staff, VA Medical Center, 2201 N. Broadwell, Grand Island, NE 68803.

UROLOGIST — Join the nation's largest health care team. VA Medical Center, Lincoln, Nebraska, seeking BC/BE Urologist for progressive 180-bed Medical Center. Licensure any state. Must meet English Proficiency Requirement. Lincoln is a university town with small-town atmosphere and metropolitan advantages. Lincoln VA Medical Center is affiliated with the the University of Nebraska for Urology Resident Program. Comprehensive benefits package. Allowable moving expenses payable. Contact Dr. Hirai, VA Medical Center, 600 So. 70th St., Lincoln, NE 68510, telephone 402/489-3802, Ext. 6750, or Personnel Service, 402/486-7819.

Practice for Sale

FOR SALE, GENERAL PRACTICE, gross $200,000/year; 90% third party pay. Retiring after 40 years successful medical practice. Solo or group. Fully equipped brick medical building with income from rentals, also for sale, or rent with option to buy after 1 year. St. Louis Suburb, P.O. Box 5711, St. Louis, MO 63121.

Equipment for Sale

MEDICAL OFFICE EQUIPMENT from ambulatory care center that includes laboratory and X-ray equipment, audio booth, Holter Monitor and large trash compactor. Used 1 ½ years. If interested call 417/869-7006. Ask for Sybil.

Real Estate

BAILEY PROPERTIES, INC., is a statewide real estate and management company that deals exclusively in land and farm sales. Our goal is to bring willing land owners and interested land buyers comfortably together to maximize the financial, recreational, agricultural and other personal advantages that come with the ownership of rural properties. Call or write Bailey Properties for more information. **Bailey Properties, Inc.,** 6356 Clayton Road, St. Louis, MO 63117. 314-863-LAND.

Position Wanted

RESIDENCY WANTED: Recent Graduate, University of Missouri-Columbia School of Medicine, desperately seeks PGY-1 training position, any specialty (primary care preferred). **Program Chiefs:** Please give me a chance. All replies confidential. Both M.D. and D.O. programs equally considered. Midwest preferred, but will consider relocating. Reply to: **File #24,** C/O Missouri Medicine, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Investment

$5,000-$60,000: FOR PHYSICIANS — Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

CHICAGO/ST. LOUIS

Superbly trained Internists and Family Practitioners, BC/BE, wanted for innovative practice building and practice ownership opportunities in the Chicago and St. Louis environs. Management support in a fee-for-service setting is provided. Compensation includes a competitive income guarantee with substantial bonus incentive.

To express interest, send your CV to:

Lori Jones
MedFirst Medical Management, Inc.,
5515 North Cumberland Avenue,
Suite 808,
Chicago, Illinois 60656.
Or call, COLLECT: (312)774-3443.

CHICAGO **ST. LOUIS**

VASOTEC®

(ENALAPRIL MALEATE | MSD)

VASOTEC is available in 2 5-mg, 5-mg, 10-mg, and 20-mg tablet strengths

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor

Warnings: *Angioedema* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics. heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident.

If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered

Precautions: *General. Impaired Renal Function* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy In such patients, renal function should be monitored during the first few weeks of therapy

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials In most cases these were isolated values which resolved despite continued therapy Hyperkalemia was a cause of discontinuation of therapy in 0 28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions*)

Surgery/Anesthesia In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion

Information for Patients.

Angioedema Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician

Hypotension. Patients should be cautioned to report lightheadedness especially during the first few days of therapy If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia Patients should be told to report promptly any indication of infection (e g , sore throat, fever) which may be a sign of neutropenia

NOTE As with many other drugs, certain advice to patients being treated with enalapril is warranted This information is intended to aid in the safe and effective use of this medication It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e g , diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions

Agents Increasing Serum Potassium VASOTEC attenuates potassium loss caused by thiazide-type diuretics Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose) Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose)

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters

There are no adequate and well-controlled studies of enalapril in pregnant women However, data are available that show enalapril crosses the human placenta Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity

Nursing Mothers Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate It is not known whether this drug is secreted in human milk Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother

Pediatric Use. Safety and effectiveness in children have not been established

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients

HYPERTENSION The most frequent clinical adverse experiences in controlled trials were. headache (5 2%), dizziness (4 3%), and fatigue (3%)

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were diarrhea (1 4%), nausea (1 4%), rash (1 4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1 1%)

HEART FAILURE The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6 7%), orthostatic effects (2 2%), syncope (2 2%), cough (2 2%), chest pain (2 1%), and diarrhea (2 1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were fatigue (1 8%), headache (1 8%), abdominal pain (1.6%), asthenia (1 6%), orthostatic hypotension (1 6%), vertigo (1 6%), angina pectoris (1 5%), nausea (1 3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1 3%), urinary tract infection (1 3%), rash (1 3%), and myocardial infarction (1 2%)

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0 5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category

Cardiovascular Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), cardiac arrest, pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis

Nervous/Psychiatric Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION)

Respiratory Bronchospasm, rhinorrhea, asthma, upper respiratory infection

Skin Herpes zoster, pruritus, alopecia, flushing, photosensitivity

Other: Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present Rash or other dermatologic manifestations may occur These symptoms have disappeared after discontinuation of therapy

Angioedema Angioedema has been reported in patients receiving VASOTEC (0 2%) Angioedema associated with laryngeal edema may be fatal If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately (See WARNINGS)

Hypotension. In the hypertensive patients, hypotension occurred in 0 9% and syncope occurred in 0 5% of patients following the initial dose or during extended therapy Hypotension or syncope was a cause for discontinuation of therapy in 0 1% of hypertensive patients In heart failure patients, hypotension occurred in 6 7% and syncope occurred in 2 2% of patients Hypotension or syncope was a cause for discontinuation of therapy in 1 9% of patients with heart failure (See WARNINGS)

Clinical Laboratory Test Findings.

Serum Electrolytes Hyperkalemia (see PRECAUTIONS), hyponatremia

Creatinine, Blood Urea Nitrogen. In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0 2% of patients with essential hypertension treated with VASOTEC alone Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1 2% of patients

Hemoglobin and Hematocrit. Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0 3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists In clinical trials, less than 0 1% of patients discontinued therapy due to anemia

Other (Causal Relationship Unknown) In marketing experience. rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported

Liver Function Tests Elevations of liver enzymes and/or serum bilirubin have occurred

Dosage and Administration: *Hypertension* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed

If the diuretic cannot be discontinued, an initial dose of 2 5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval In such patients, an increase in dosage or twice-daily administration should be considered If blood pressure is not controlled with VASOTEC alone, a diuretic may be added

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS)

Dosage Adjustment in Hypertensive Patients with Renal Impairment The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL) For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2 5 mg once daily The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily

Heart Failure VASOTEC is indicated as adjunctive therapy with diuretics and digitalis The recommended starting dose is 2 5 mg once or twice daily After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses The maximum daily dose is 40 mg Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2 5 to 40 mg per day of VASOTEC, almost always administered in two divided doses (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response (See WARNINGS)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia. In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1 6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i d and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function The maximum daily dose is 40 mg

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486

J6VS18R2(817)

MSD
MERCK
SHARP&
DOHME

IT MAY CHANGE THE WAY YOUR PATIENTS FEEL ON ANTIHYPERTENSIVE THERAPY

MSD
MERCK
SHARP &
DOHME

FOR MANY HYPERTENSIVE PATIENTS
START WITH ONCE-A-DAY

VASOTEC®

(ENALAPRIL MALEATE | MSD)

For a Brief Summary of Prescribing Information, please see next page of this advertisement.

Copyright © 1987 by Merck & Co., Inc.

J6VS18R

Missouri Medicine

Journal of the Missouri State Medical Association

September 1989

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

SEP 15 1989

[redacted]

You didn't go into medicine to become a human target.

Every day you put your reputation and practice on the line. And, with the increasing barrage of malpractice claims, your business has become a virtual firing line.

Now, you can do something about it. Protect yourself with MOMEDICO. We're the only physician owned professional liability insurance company founded and endorsed by the Missouri State Medical Association. MOMEDICO is a stock insurance company rather than a mutual assessable company. The overwhelming majority of our stock and policy holders are Missouri physicians.

At MOMEDICO we are proud of our reputation for highly trained and totally committed field service representatives. Our reputation for results is outstanding, too. Of all cases handled to conclusion, over 80% were closed without any payment of indemnity. So, if you find yourself on the firing line, MOMEDICO is the company that lines up to protect you.

MOMEDICO. . .the best company a physician can keep.

MOMEDICO

Better Protection. Together.

10795 Watson Road
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

LIBRARY OF MEDICINE
BOSTON, MA

SEP 15 198

Contents

Missouri Medicine

Editor	Donald G. Sessions, M.D.
Associate Editor	Ramona M. Chapman, M.D.
Editor Emeritus	Jordan W. Burkey, M.D.
Managing Editor	Susan Flanigan Gold
Editorial Assistant	Valerie A. Peters

Editorial Board

Anesthesiology	Mark G. Zukaitis, M.D.
Cardiovascular Surgery	Jack J. Curtis, M.D.
Dermatology	Philip C. Anderson, M.D. John DeSpain, M.D. Ernest Lorenc, M.D.
Emergency Medicine	David M. Trantham, M.D.
Family Practice	William D. Bradshaw, M.D. Carl R. Kruse, M.D. Kirby L. Turner, M.D.
Gastroenterology	Jay P. Marshall, II, M.D.
Hematology	William H. Crosby, M.D.
Internal Medicine	John S. Daniels, M.D. Stephen Hamburger, M.D. Robert K. Skillman, M.D.
Neonatology	Elizabeth J. James, M.D.
Neurosurgery	Keith Rich, M.D.
Obstetrics and Gynecology	James Daly, M.D.
Oncology	Michael C. Perry, M.D.
Ophthalmology	John C. Hagan, III, M.D. F. Thomas Ott, M.D.
Orthopedics	William P. Thorpe, M.D.
Otorhinolaryngology	J. Regan Thomas, M.D.
Pathology	Scott A. Martin, M.D.
Pediatrics	R. Don Blim, M.D.
Physical & Rehabilitation Medicine	Martin B. Wice, M.D.
Plastic Surgery	Leroy Young, M.D.
Psychiatry	William F. Clary, M.D. J.C. Corvalan, M.D.
Radiation Therapy	MacDonald B. Logie, M.D.
Radiology	Donald R. Germann, M.D.
General Surgery	Mark S. Cotner, M.D. Richard O. Craig, M.D. Donald Silver, M.D. Michael Metzler, M.D.
Vascular Surgery	Kirt Nichols, M.D.
Urology	George M. Austin, M.D.

Publications Committee

Chairman	Donald G. Sessions, M.D.
Vice-Chairman	Ramona M. Chapman, M.D.
Members	Jack J. Curtis, M.D. John S. Daniels, M.D. Stephen Hamburger, M.D.

Cover

MSMA Office, 113 Madison, Jefferson City, MO by architectural photographer Larry Taylor of *Orlando, FL.* The historic building located across from the Missouri Governor's Mansion was recently renovated by Jefferson City contractor B.D. Simon under the direction of the Columbia architectural firm Simon and Walthers .

Photo feature

618 The Transformation of MSMA Headquarters

Editorials

611 Seeing the Writing on the Wall: *And Helping Patients to Make Decisions Regarding it*
Michael H. Metzler, M.D., *Columbia, Missouri*

Special Series

625 Human Immunodeficiency Virus Infection: *Clinical Diagnosis*
William G. Powderly, M.D., *St. Louis, Missouri*

Scientific Articles

628 Determination of Death by Neurological Criteria
John J. Oro, M.D., *Columbia, Missouri*

632 Impotence: Its Evaluation and Treatment
Barry E. Gordon, M.D., and Stephen H. Weinstein, M.D., *Columbia, Missouri*

637 Magnetic Resonance Imaging: Failure to Demonstrate Spinal Arteriovenous Malformations in Four Patients
Dipak C. Shah, M.D., Randall Jones, M.D., Akhtar Ashraf, M.D., Angela M. Noto, M.D., and Sara Y. Shull, M.D. *Kansas City, Missouri*

Departments

613 President's Page
615 Auxiliary Message
617 Practice Management
643 CME
649 Physician's Recognition Awards
651 New Members
655 In Memoriam
657 Medical School News
662 Information for Contributors
662 Advertising Index
664 Classifieds

Apologies to Dr. Carol Williams of St. Louis who serves as vice chairman of the MSMA Council. Her photo was omitted from the August Directory issue where it should have appeared on page 450.

We regret the inconvenience this may have caused Dr. Williams and our readers.

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ ____________

Date of Birth ____________

Smoker/Non-Smoker (circle one)

Name ____________

Address ____________

City/State ____________

Zip ____________ Phone ____________

Missouri Medicine

Vol. 86, No.9 *Journal of the Missouri State Medical Association* September 1989

MSMA PHONE BOOK

Missouri State Medical Association
314/636-5151
American Medical Association
312/645-5000
MSMA Physicians' Health Program
314/768-4990
MOMEDICO
1-800-392-8039
Dodson Insurance Group
1-800-825-3760
MSMA Retirement Plan/ Prudential-Bache Securities
1-800-877-9200
314/721-9200
Forrest T. Jones
1-800-892-7272
Fred S. James
KC 1-800-892-7105
St. Louis 1-800-445-9513
Health Care Financing Administration
816/426-5233
INTRAV
314/727-0500
Medicaid Provider Relations
1-800-392-0938
Medicare Provider Relations
1-800-392-3070
Medicare Part B Blue Cross Blue Shield
Kansas City
1-800-654-9629
Missouri Department of Health
314/751-6400
Missouri Department of Social Services
314/751-2086
Missouri Patient Care Review Foundation
(Preadmission) 1-800-392-8060
(General info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs
314/751-8042
Missouri State Board of Registration of the Healing Arts
314/751-2334

MSMA Officers

President	Marvin A. Singleton, M.D., *Joplin*
President-Elect	Gary A. Dyer, M.D., *St. Joseph*
Secretary	Norman P. Knowlton, III, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Clarence A. Martin, M.D., *Joplin*
Vice President	Jack Kayes, M.D., *St. Louis*
Vice President	Barbara Buchanan, M.D., *Kansas City*
Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*
Vice-Speaker	James B. Wolfe, M.D., *Springfield*

Councilors

Dorothy D. Reister, M.D., *Shawnee Mission*, Chairman
Carol F. Williams, M.D., *St. Louis*, Vice Chairman

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *Florissant*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Peters*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A.J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Robert T. Gibbons, Jr., M.D., *Overland Park, KS*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Ms. Laura Carlson, medical student, *Kansas City*
Charles Barbee, M.D., *Columbia*
Charlene Prather, M.D., *Kansas City*

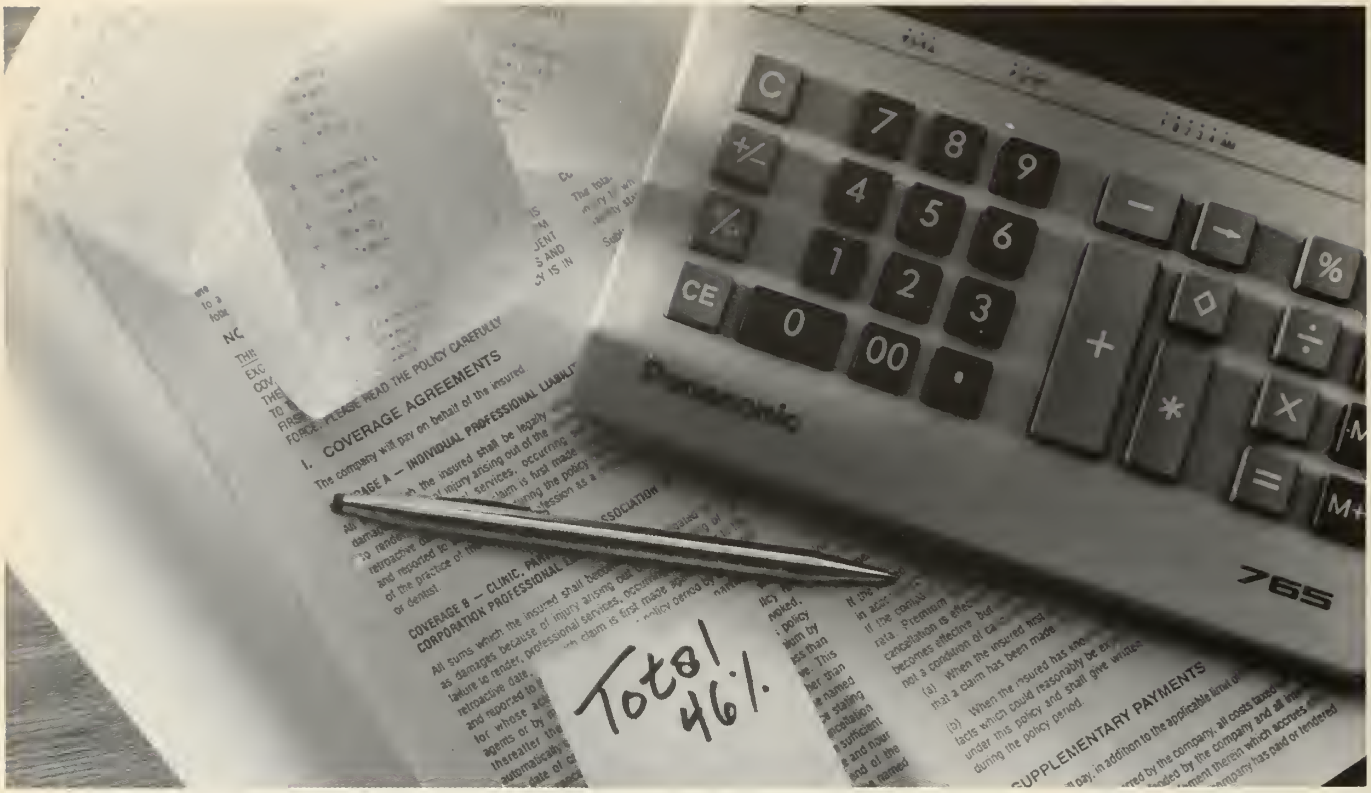
Vice Councilors

Robert Schaaf, M.D., *Gower*
Carl R. Kruse, M.D., *Palmyra*
Meredith C. Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Jay Yedlin, M.D., *Kansas City*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Ms. Lora Mills, medical student, *Columbia*
Paul Petruska, M.D., *St. Louis*
Carla Siegfried, M.D., *St. Louis*

AMA Delegates

Keith Ashcraft, M.D., *Kansas City*
Vernon Balster, M.D., *St. Louis*
George Bohigian, M.D., *St. Louis*
Walter German, M.D., *Springfield*
Melvin C. Kasten, M.D., *Cape Girardeau*
Robert R. MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251
Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.
Subscription rates: $20 per year.
Second class postage paid at Jefferson City, Missouri and at additonal mailing offices.
Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.
The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.
Copyright 1989 by the Missouri State Medical Association. All rights reserved.
Publication number 355380.



Introducing Claims Paid Coverage From Risk Control Associates

Save Up to 46% on Your Premiums with Guaranteed Rates for 3 Years!

Cut Your Liability Insurance Costs Up to 46% With Our NEW Claims Paid Coverage. If you are tired of the high cost of Medical Liability Insurance, now there is something you can do about it. It's called **Claims Paid** coverage, and it can cut your premium costs up to 46%. **And we guarantee a level premium for 3 years if you join now!**

Claims Paid is a bold new concept in medical liability coverage. It offers the benefits of full protection at a fraction of the cost. Risk Control Associates is the only company to offer this innovative plan to the physicians and dentists of Missouri.

Our New Claims Paid Policy is Designed for Maximum Protection at a Much Lower Premium. Risk Control Associates can offer reduced premiums for **Claims Paid** policies because premiums are based on money actually paid out. And **Claims Paid** Insurance is available in the same coverage options as Occurrence and Claims Made policies.

If you are currently insured under one of our other policies, you can easily convert your coverage to **Claims Paid.**

Risk Control Associates is a Leader in Innovation and Services. Risk Control Associates is Missouri's leader in the Medical Liability Insurance field. We are owned and managed by physicians, so we know what is important to you. We understand your need for maximum protection and excellent service. And we deliver both. We are "Physicians Helping Physicians."

For more information about our new **Claims Paid** Policy, call for our free brochure, "Understanding Claims Paid Medical Liability Insurance" or ask to speak with a company representative. Our phone number is (800) 422-5122. We will be glad to answer any questions you may have.

You can start saving up to 46% on your insurance premiums right away, **so contact us today.** It will mean significant savings to you and an excellent investment in your future.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS
Physicians Helping Physicians

A Missouri Mutual Assessable
Chapter 383 Company

1111 S. Glenstone • Suite 3-102
Springfield, Missouri 65804
(800) 422-5122 • (417) 862-0650

GUEST EDITORIAL

by Michael H. Metzler, M.D.

Medical technology does not *ensure patient survival. Today, physicians must assist patients and their families in making the right treatment decision, particularly when dealing with aneurysms.*

Seeing the Writing On the Wall

And Helping Patients to Make Decisions Regarding It

In 1982 the University of Missouri-Columbia Hospital & Clinics began a helicopter medical transport service for Central Missouri. The impact of that service upon reduction in mortality and morbidity is under constant internal review.

In the areas of trauma and cardiac care, we show a positive impact upon patient survival. With the treatment of ruptured aortic aneurysms, however, we find just the opposite effect. Prehelicopter mortality rates were 25.5%; post-helicopter 63.5%.

During the last six years while helicopter transport has been in use, vascular surgery, anesthesia and postoperative critical care facilities and expertise have improved. An increase in survival of critically-ill trauma and cardiac patients has taken place over the same period of time as our increase in mortality for ruptured abdominal aortic aneurysms.

We have reviewed these results to explain this paradox and conclude that the fate of transported patients with ruptured abdominal aortic aneurysms is often sealed prior to their arrival at our institution. Experiments in shock reported in 1950 by C. J. Wiggers* are quite relevant. His studies showed that animals allowed to remain in hypovolemic shock for a critical period of time would die even if normal blood volume was later restored. Patients who present with ruptured abdominal aortic aneurysms cannot be adequately resuscitated from shock prior to surgical control of their aneurysm. Even with helicopter transport, these patients have frequently undergone several hours of shock and sustained fixed organ damage to which they will succumb despite repair of the ruptured aneurysm. In these cases, rapid helicopter transport and skillful in-flight nursing care makes survival statistics appear worse by preventing death during transport.

What might be done to remedy this situation? There is no easy answer; however, there is room for action. Many of the patients who died from rupture were known to have had large abdominal aortic aneurysms before the terminal event. These patients apparently had not been considered surgical candidates until after their aneurysm ruptured and they were in extremis.

The natural history of abdominal aortic aneurysms is well-established; the five-year risk of rupture of an 8 centimeter aneurysm being in excess of 75%. Would it not be reasonable to frankly discuss the options of elective aneurysm surgery with each patient known to have an abdominal aortic aneurysm 5 cm. or greater in size? If the patient does not desire surgical treatment, he/she should make his/her wishes well-known to physicians and family members. The use of a living will would be very appropriate under these circumstances. If surgical treatment is desired, the patient will certainly be a better operative risk for an elective aneurysm repair

continued on page 614

ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS IN ANESTHESIOLOGY AND SURGICAL SPECIALTIES

If you are a resident in Anesthesiology, Orthopaedic Surgery, or General Surgery including Neurosurgery, Colon/Rectal, Cardiac/Thoracic, Pediatric, Peripheral/Vascular and Plastic Surgery, the Army Reserve has a new and exciting opportunity for you. The New Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Assistance Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of $706 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program. Call (collect) your U.S. Army Medical Department Reserve Personnel Counselor:

MAJOR LONNIE HOUK
(314) 263-4146

ARMY MEDICINE. BE ALL YOU CAN BE.

President's Page

by Marvin A. Singleton, M.D.
MSMA President

Physicians cannot afford to abandon their role as the patient's advocate in order to become the government's rationers of health care.

The Bitter Pill — Rationing

Reduction of health care costs through expenditure targets is a thinly-veiled, congressional method of rationing health care and limiting the elderly's access to such care. Physicians *should not* and *will not* tolerate becoming the rationers of health care to the American public. We should, instead, insist and continue on our role as the patient's advocate.

What are expenditure targets, also known as ETs? On June 29, 1989 the House Ways and Means Committee released its Health Care Budget Reconciliation package for the fiscal year (FY) 1990. Contained within this package is a proposal to adopt expenditure targets in an attempt to hold down physician cost.

According to the expenditure target proposal, Medicare would pay predetermined amounts for all physician services in a given year. If provider costs exceeded these targets, Medicare would still pay, but would reclaim this spending by reducing payments to physicians in subsequent years. Such targets would begin with FY 1990.

Dr. Louis Sullivan, Secretary of Health and Human Services, stated "the only effect of exceeding the target amount is the following year's rate of physician fees increases would be reduced, not the services provided."

Compare this idea with a retailer forced to provide clothing to the homeless. If the national clothing budget is exceeded, the next year he would have to provide the same amount of clothing at a much-reduced cost, perhaps even below his own costs for the clothing. The retailer either decides to seek other employment or shifts his costs to maintain the same level of services.

Health care is no different for if the reimbursement rate is reduced, services and rationing would follow by the mere necessity that cost shifting is impossible in today's health care climate. Therefore, physicians would become health care rationers with the government asking physicians to decide how not to treat their patients instead of how to treat them — a situation physicians can never accept.

By any name, expenditure targets are simply an attempt by Congress and the Bush Administration to balance the budget on the backs of America's elderly causing physicians to ration the health care by across the board reduction of fees. Reduction of services would evolve as well.

Why are we in this dilemma? The federal government is unable to manage its own budget, much less the health care budget. For example, the 1984-1985 physician fee freeze did not address the major Medicare problems but exacerbated existing ones. The real message of ETs is that the government cannot control the Medicare program. Instead of reasonable approaches to specific problems, the government is throwing up its hands and advocating reponsibility to a process that has not been contemplated effectively, much less tested.

In response to lowering and controlling hospital costs, the government has done a very poor job. Capitalization is still within the reimbursement formula for hospitals, so most hospitals are expand-

continued on page 614

President's Page

continued from page 613

ing rapidly to continue feeding at the Medicare trough. There are other areas where efficient addressing of specific problems would not only benefit the program but enhance it with a reduction in overall costs. The Medicare system set up a method whereby the only hospital room Medicare recipients may purchase is the most elaborate and most expensive. Why can't recipients check into a "cheap" hospital room?

Ideally, the government could improve the economics of Medicare through practice guidelines, a concept supported by the AMA. Although the number of practice guidelines today is small compared with the future need, there are enough of them to demonstrate their usefulness in reducing the cost of medical care. For example, a National Institute of Health Conference held in 1980 issued guidelines for the management of fibril seizures in children. The NIH estimated these guidelines could save $67 million per year.

Practice guidelines do indeed work. More importantly, they control costs by reducing the amount of *inappropriate* care. Expenditure targets, on the other hand, do not discriminate; they control costs by limiting appropriate as well as inappropriate care.

In addition, the government must address "reasonable" and "fair" compensation. The large disparity between geographic areas is not fair. Where is the relative value scale from the Harvard study?

There are many questions to be answered. Our nation spends far more than any other country, per capita, for health care. But we also spend $15 billion annually for entertainment. This expenditure is also far more than any other major industrialized nation.

There are many other questions to be asked such as why did physician services increase from 1980-1986? That can be answered easily because inpatient restrictions were placed on hospitals, forcing more procedures to be done outside the hospital as outpatients, and a higher percentage of those people eligible for Medicare benefits are exercising those rights.

As surely as the situation described by Henry Aaron and William Schwartz in *The Painful Prescription: Rationing Health Care*, the same situation will develop with physician services. To understand how we got where we are, it's time that some of the federal planners read *The Social Transformation of American Medicine* by Paul Starr. Many of today's health care system problems were caused by Congressional health care planners who developed a Band-Aid approach to ever-increasing problems with the Medicare system. The elderly were guaranteed access to health care services through Medicare 26 years ago. Now, the bitter pill of health care rationing will be doubly-felt by America's elderly who will have our nation's budget balanced on their backs along with physicians who must deny access to health care to people who may need it the most.

Across the board approach to budgetary problems by placing caps on expenditures without addressing the needs for inappropriate care as well as appropriate care is an easy solution for Congress but must be borne by those back home.

Physicians cannot afford to abandon their role as the patient's advocate in order to become the government's rationers of health care. We cannot afford to provide the government with a quick fix to a budgetary problem that neither we nor our patients created.

Guest Editorial

continued from page 611

(mortality 3-5%) than the same procedure following rupture.

If the patient with a known aneurysm of significant size ($\geq$ 5 cm.) is not adequately counselled regarding the high risk of catastrophe that awaits without elective treatment, quite frequently the following scene unfolds when the aneurysm does rupture: The patient himself is often too ill to make decisions regarding his care. The family is distraught and wishes to spare no expense or therapy which might save their loved one. The surgeons to whom the unfortunate patient is delivered again try to prove the experiments of Wiggers do not apply (at least in this case). The intensive care unit staff monitors and resuscitates and measures and documents the fate of organs starved for blood flow too long before flow was restored. Multiple organ system failure and sepsis again intervene.

State-of-the-art transport, surgery and postoperative care can only succeed in closing the barn door, the whereabouts of the horse is a matter of planning.

Reference

Wiggers CJ: *Physiology of Shock.* New York, Commonwealth Fund, 1950.

Editor's note: Dr. Metzler is an associate professor of surgery at the Missouri University School of Medicine in Columbia as well as medical director of the surgical intensive care unit. He serves as a surgery reviewer on the Editorial Board.

Auxiliary Message

by Ginny Thomas
4th vice president—
membership

Encourage your spouse to make a difference in the future of medicine by joining the Auxiliary.

The Auxiliary offers opportunities for all

Since its founding in 1922, the AMA Auxiliary has had one basic purpose: to improve the quality of life for all Americans through a federation of concerned physicians' spouses. As a member of your state and local Auxiliary, you are a part of this federation.

The AMA Auxiliary has been a major force behind programs to promote immunization for children, services for older Americans, healthy lifestyles and the prevention of substance abuse, child abuse and drunk driving.

The county auxiliaries implement local health programs, promote community activities and provide public relations for the medical profession. Volunteers assist the medical society, provide manpower to respond to legislative issues, and create coalitions with community health organizations for more effective local programs. The county provides support for physicians and their families through service and fellowship. Your membership is important to the county auxiliary.

The MSMA Auxiliary coordinates the county auxiliaries. Combined, the Missouri auxiliaries promote priorities and goals of MSMA. In addition, statewide programs bring health care to every community through school health education, legislation, immunization programs and dissemination of health information.

Newsletters, the *Auxiligram*, meetings, workshops and seminars provide contact with all members. Every auxilian may participate in forums for exchange of ideas among leaders and members, opportunities for participation at all levels, assistance and direction for county programs. Legislative alert systems pass information to a network of volunteers directed by the state auxiliary in addition to the communication of national program information to county leaders and members. We need you as a member of Missouri State Medical Association Auxiliary.

The AMA Auxiliary provides literature on special concerns of physicians' spouses, professional liability, impairment, marriage, retirement. *Facets*, a bimonthly magazine, covers topics from the medical family and physician's children to health and legislative concerns. A clearing house for community programs is available through the Project Bank. Topics covered include fitness, drunk driving, drug abuse, and teenage suicide.

Auxilians obtain leadership training through the AMAA confluences and annual meeting held in Chicago featuring seminars that focus on volunteers and community enrichment. Professional skills development programs, a centralized system for documenting volunteer skills also are available to members. Merely call the AMA Auxiliary office to obtain guidelines on volunteer and community leadership.

The MSMAA gives workshops at their annual Fall Conference (October 17-18 at the Ramada Inn in Springfield) as well as their Annual Meeting (April 5-8, Tan-Tar-A, Lake of the Ozarks). County auxiliaries also provide special

continued on page 616

■ Auxiliary Message

continued from page 615

speakers and events at their regular meetings.

We need you as a member of the Auxiliary. Membership is the vital ingredient if we are to continue to grow in providing volunteer services to our communities.

Our theme this year is "Bloom Where You are Planted and Share the Bouquet." May the bouquets we share within our communities, homes and churches be enhanced by the many blossoming ideas, programs and opportunities for service as active participating members of county, state and national Auxiliary. Indeed, we will bloom and share.

We ask you, the physician, to encourage your spouse to join the Auxiliary. If there is no organized Auxiliary in your area, each spouse can make direct contact through an Auxiliary member or county officer. To initiate or renew a membership, complete and return the form below. The appropriate county, state and national information will be forwarded promptly.

Please encourage your spouse to become a member of the Auxiliary and assist in those programs that improve the health and quality of life for all people. We really can do more together. ■

MSMA

Auxiliary

Fall Conference

October 17-18

Ramada Inn

Springfield

Watch for program and details in the next Auxiligram.

You are cordially invited to join the Missouri State Medical Association Auxiliary

Please print or type the requested information below.
You will receive a membership packet promptly.

Name: ______________________

Spouse's Name: ______________________

Address: ______________________

City: ______________ State: ________ Zip: __________

Home Telephone Number: ______________________

Physician's County Affiliation: ______________________

Mail completed form to:

Mrs. Robert M. Thomas (Ginny)
4th Vice President—Membership
MSMA Auxiliary
2219 Danforth Court
Columbia, MO 65201

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102

*Although your name will **not** be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Dear Dr. Woerth:

I understand that Medicare will be returning or holding claim forms that are not coded with ICD-9-CM codes and that are not coded to the greatest level of specificity, i.e. using the correct amount of digits (3, 4, or 5). I have recently sent claims to Medicare that were incorrectly coded according to the new guidelines. I assume that the payments for these claims will be less than desirable due to these coding errors. Is it possible to resubmit claims on which I have made errors in hopes of receiving better reimbursements?

K.L.

Dear K.L.:

Yes, corrected claims can be submitted to Medicare, as well as other insurance companies, and a review of the claim be requested. With Medicare, you may request a review within six months of the determination of the claim (as indicated on the Explanation of Medicare Benefits).

When requesting a review, state the reason, i.e. "I am not satisfied with the amount paid", "payment is less than usually received for service", etc.. There is a form (HCFA 1964) that you may complete to request a review. Completion of this form is not required for review.

The review process includes an independent, critical re-examination of the claim by Medicare personnel who were not involved in the initial claim decision. Any information that was omitted from the original claim that supports your request for review and greater payment should be included with the resubmitted claim. If errors in coding were the problem on the original claim, make all necessary corrections and include concise explanations of the changes, if appropriate.

Although a request for a claim review takes extra time, it is usually worth the time spent. About 60% of all requests for review result in additional payment on a claim. Please note that you might not receive all that you feel you deserve but generally receive some additional amount.

Dear Dr. Woerth:

We find it difficult to keep track of our "past due" accounts. We are using a pegboard system with ledger cards. Do you have any suggestions?

L.M. and J.F.

Dear L.M. and J.F.:

I suggest that you age your accounts receivable every 30 days. One easy way of doing this is by using different colored self-adhesive stickers to note accounts that are 30, 60, and 90 days past due. You can age accounts as long as you like but I recommend that accounts that are over 120 days past due be turned over to a collection agency or to an attorney that specializes in collections.

Each 30 days when aging your accounts, you should run a tabulation of the total amount of accounts that are 30, 60, and 90 days past due. Accounts that have been turned over to a collection agency or attorney should be written off to bad debt. Allowing this amount to accumulate erroneously inflates the accounts receivables. If money should be collected on accounts that are over 120 days past due, adjust the ledger and pegboard to reflect the payment made.

If you age your accounts as I have suggested, you will be able to better track your "past due" accounts. ■

Photos: Top Left: Remember the old cork walls? **Top Right:** The conference room used to share space with the workroom. **Middle:** The reception area of MSMA headquarters stripped to the bare necessities. **Bottom Right:** Mr. Cooper's previous office space. **Bottom Left:** Mr. Cooper's new office space before renovation.

MSMA Office Renovation Completed

Photos: **Top Left:** The new conference room boasts a beautiful mahogany conference table and ample space. **Top Right:** In Mr. Cooper's new office space, the original woodwork and fireplace was restored and enhanced. **Bottom Right:** The new reception area at MSMA Headquarters.

As of June, the finishing touches were applied to the MSMA Headquarters in Jefferson City after a long and concentrated renovation project. The additions, deletions and enhancements culminated in a sparkling professional atmosphere. We are all pleased with the final outcome and are anxious to show off the new building to the members of MSMA. So be sure to stop by 113 Madison the next time you are in Jefferson City – we think you'll like the new look!

1989 PAC Sustaining Members

Duane C. Hellam
Springfield

Mrs. Eileen Dyer
St. Joseph

Stephen Phillips
Columbia

Mila Cunningham
Columbia

Byron M. Stuart
Boonville

Robert R. MacDonald, Jr.
St. Louis

Barbara N. Buchanan
Kansas City

Ronald A. Youmans
Kansas City

David C. Prickett, Jr.
Kansas City

Carol Williams
St. Louis

David Hall
Rogersville

Hubert A. Ritter
St. Louis

Mr. C. C. Swarens
Jefferson City

Adolph Mueller
Joplin

Norman P. Knowlton, III
Springfield

Jo-Ellyn M. Ryall
St. Louis

H. B. Ivy
Springfield

Dorothy D. Reister
Shawnee Mission, KS

A. J. Campbell
Sedalia

Mrs. Janet Campbell
Sedalia

Ruth Kauffman
Versailles

David Wilkinson
St. Louis

John N. Martin
St. Joseph

Alan Braun
Jefferson City

Nancy J. Bunge
Mexico

B. C. Portunondo
St. Louis

J. Otto Lottes
St. Louis

Marvin E. Roehrs
Marshall

Howard J. McAlhany
Springfield

Thomas J. Donovan
St. Louis

A. D. Shaplin
St. Louis

Eugene T. Hansbrough
Poplar Bluff

Robert J. Williams
St. Joseph

Elmer H. Van Dyke
Sedalia

William R. Cole
Sedalia

J. P. Boedeker
St. Louis

Thomas B. Moore
Joplin

Ronald G. Benson
Springfield

Joseph W. West
Kirkwood

Stanley M. Wald
St. Louis

Walter A. German
Springfield

Arlen D. Winsky
Springfield

Theodore L. Paletta
St. Louis

Nicola Katf
Kansas City

Edward D. Kinsella
St. Louis

Willard M. Allen
Glenwood, MD

Charles M. Lederer, Jr.
Kansas City

Harold W. Keairnes
Kansas City

Durnell McLaughlin
Kansas City

James C. Redington
St. Louis

William C. Allen
Columbia

Don Pruett
St. Louis

Robert V. Tompson
Moberly

Norman R. Wall
Springfield

Fred G. McQueary
Springfield

Glenn M. Sherrod
Bridgeton

J. Will Fleming, Jr.
Moberly

Michael S. Clarke
Springfield

Mrs. Kathy Clarke
Springfield

Edward M. Wittgen
St. Louis

Durward G. Hall
Springfield

Harry C. Eggleston
St. Louis

Vernon H. Balster
St. Louis

Jacques Van Ryn
Bridgeton

John C. Perlmutter
St. Louis

Frank Shagets
Joplin

Mrs. Lyda Aitken
St. Louis

Donald A. Fakhoury
Kansas City

Ina May Fakhoury
Kansas City

Mrs. Elizabeth Huffaker
St. Louis

Jerry L. Meyer
Concordia

Mrs. Jan Meyer
Concordia

William C. Shell
Sikeston

Robert B. Brigden
Neosho

Sam L. Farrell
Washington

Harry Cole
St. Louis

Mr. Michael G. Grimes
St. Louis

Mr. Thomas Knapkco
St. Louis

Meredith Payne
St. Louis

Stephen E. Vilmer
Overland Park, KS

Mrs. Jean Wankum
Jefferson City

Mrs. Kathryn H. Pickering
Kansas City

Edith Trugly
St. Louis

David E. Perkins
St. Louis

Herman J. Hausheer
Independence

Mrs. Marge Perkins
St. Louis

James C. Vest
Ballwin

William A. Hardman
Springfield

J. Michael Ribaudo
St. Louis

George E. Wakerlin
Millbrae, CA

Thomas F. Scully
Manchester

Robert Schaaf
St. Joseph

James E. Gaba
Kansas City

Anthony S. Shen
St. Louis

Mrs. Connie Ashcraft
Kansas City

Daniel F. O'Sullivan
St. Louis

Steven F. Buie
Lee's Summit

Raymond J. Caffrey
Independence

Lynn L. Kleopfer
Moberly

Donald E. Kuenzi
Kansas City

Benjamin A. Lampert
Springfield

Harry G. Miller
Clinton

George K. Parkins
Kansas City

Mrs. Jacqueline Sanders
Kansas City

David L. Spalding
Rogersville

James B. Wolfe, Jr.
Springfield

James J. McMillen
St. Joseph

1989 SuperPAC Members

Frederick D. Peterson
St. Louis

Frederick W. Hahn, Jr.
Kansas City

Gary A. Dyer
St. Joseph

David O. Barbe
Mountain Grove

John C. Hagan, III
N. Kansas City

Mr. Royal O. Cooper
Jefferson City

Weldon L. Sportsman
Kansas City

Marvin A. Singleton
Joplin

H. Jerry Murrell
Columbia

Charles W. Barbee
Columbia

Mrs. Pattye Barbee
Columbia

William Dorzab
Kansas City

Melvin C. Kasten
Cape Girardeau

Mrs. Mary C. Kasten
Cape Girardeau

Richard V. Bradley
St. Louis

Hugh E. Stephenson, Jr.
Columbia

George M. Bohigian
St. Louis

Mrs. Chris Bohigian
St. Louis

T. J. Cooper
St. Louis

Mrs. Barbara Cooper
St. Louis

Keith LaFerriere
Springfield

Nicholas F. Robinson
Kennett

J. Michael Conoyer
St. Peters

Stephen R. Curry
Springfield

Barry J. Bass
Rolla

Robert T. Gibbons
Prairie Village, KS

Donald A. Potts
Kansas City

Francis X. Lieb
Bloomfield, CT

Edgar Ailor
Columbia

Kirby L. Turner
Poplar Bluff

Phillip M. Hornbostel
Sedalia

Thomas C. Sparkman
Cape Girardeau

Mrs. Carol Sparkman
Cape Girardeau

Keith Ashcraft
Kansas City

T. J. Glenn
Cape Girardeau

William Huffaker
St. Louis

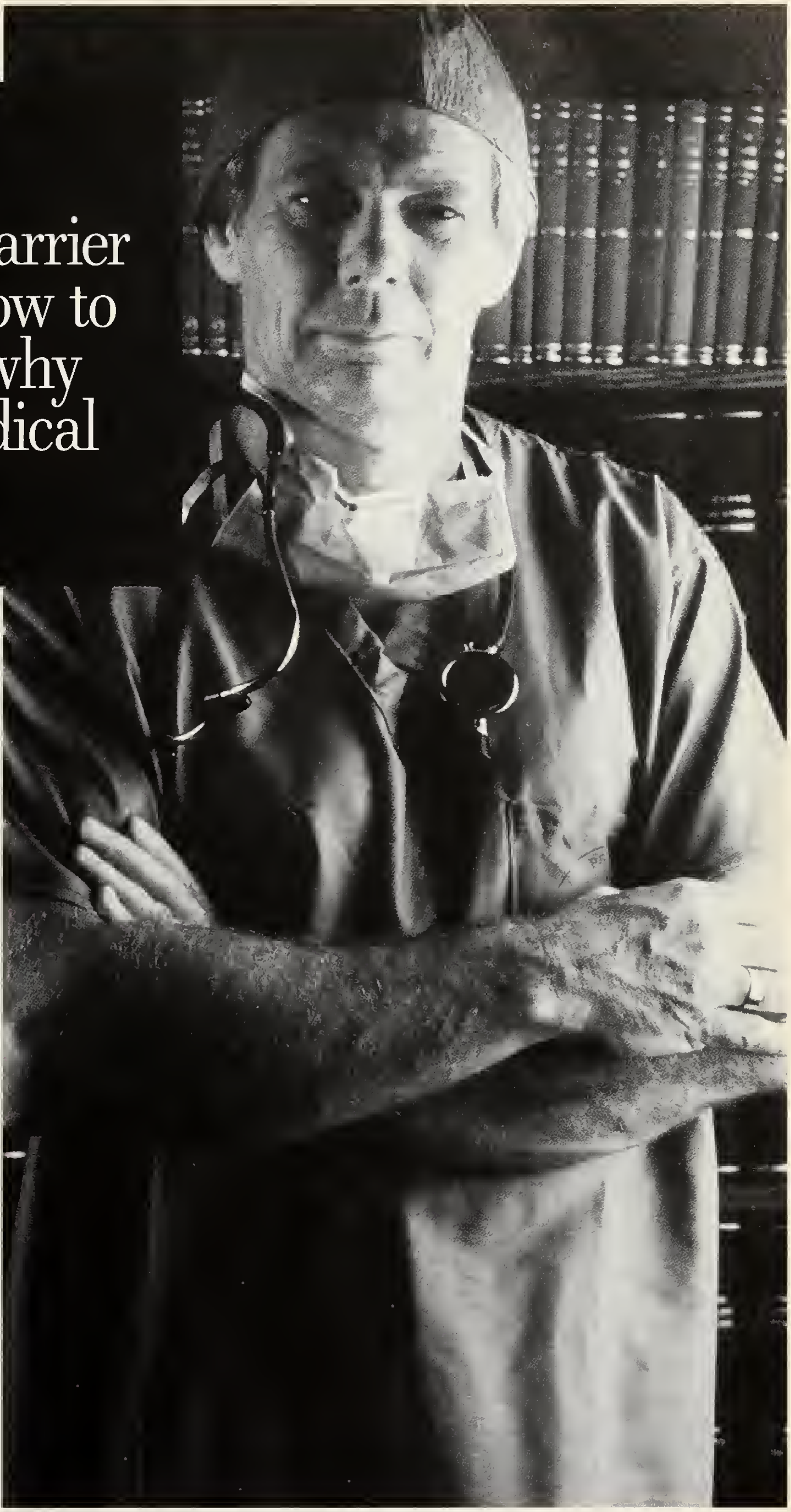
Roger L. Mell
St. Louis

John I. Matthews
Jefferson City

Jack L. Croughan
St. Louis

John R. Fitz
Farmington

"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."



At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

America's premier professional liability insurer.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222
1-800-321-6726

Integrity.
Yours, and
Ours.

Financial soundness.
Yours, and
Ours.

The future.
Yours, and
Ours.

Medical Defense Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MEDICAL PROFESSIONAL LIABILITY INSURANCE

SPECIAL SERIES

Human Immunodeficiency Virus Infection

Clinical Diagnosis

William G. Powderly, M.D.
St. Louis, Missouri

Primary care physicians are likely to see HIV-infected individuals well before they develop full-blown AIDS or even AIDS-related complex. The author presents an overview of the symptoms that may appear in so-called "asymptomatic" patients with human immunodeficiency virus infection.

As we head into the final decade of the 20th century, it is readily apparent that disease caused by Human Immunodeficiency Virus (HIV) will increasingly demand much of the time and attention of primary care physicians in this state. Estimates of the prevalence of infection in Missouri suggest that at least 25,000 residents of the state are infected with this virus. Conservative projections suggest that at least half of these will develop the Acquired Immunodeficiency Syndrome (AIDS) in the forthcoming decade. Most physicians in primary care will encounter several such patients in their practice. In the next year, members of the Washington University AIDS Clinical Trials Unit will review most aspects of care of HIV-infected patients in a series of articles. Our initial focus will be on the diagnosis and therapy of HIV infection and will be followed by reviews of most of the opportunistic infections and malignancies that occur in HIV disease. The next article will be concerned with laboratory diagnosis of HIV infection. This review will focus on clinical manifestations at varying stages of infection.

Phases of HIV Infection

Human Immunodeficiency Virus is a human retrovirus that infects at least two cell types — T helper lymphocytes (CD4 or T4 lymphocytes) and macrophages. As is well known, transmission is primarily by sexual or parenteral routes. Acute infection is silent in the majority, but may present as a mononucleosis-like illness. After infection, most patients have a period of latency — asymptomatic infection that may last from 18 months to 10 years or more. During this phase, however, progressive loss of T4 lymphocytes occurs in most patients, leading to a relentless decline in the competence of their immune systems. Many patients are never truly asymptomatic, but have minor complaints that may be explained by their chronic viral infection. This period of quiescent disease may be ended abruptly by the onset of an AIDS-defining diagnosis or subacutely by the onset of a syndrome known as AIDS-related complex (ARC), which has also been termed "pre-AIDS." Widespread screening for early HIV disease is not currently recommended, in part because of the lack of definitive therapy. It is important to identify those patients whose symptoms are due to HIV, not only to avoid misdiagnosis, but also because some guidance and therapy may be available for individual patients.

Primary HIV Infection

Acute HIV infections are more likely to be seen in a general practice setting than in a specialist hospital unit. Although most acute infection is asymptomatic,

Table 1
Common Skin Problems in HIV Disease

Seborrheic dermatitis with eczema
Folliculitis
Psoriasis
Xeroderma
Herpes simplex
Herpes zoster
Molluscum contagiosum
Dermatophyte infections
Drug eruptions
Kaposi's sarcoma

Table 2
AIDS-Related Complex (ARC)

Unexplained weight loss (10% of body weight in 6 months)
Fevers or night sweats persisting for 1 month, or both
Unexplained diarrhea persisting for 30 days
Recurrent oral candidiasis
Multidermatomal Herpes zoster
Oral hairy leukoplakia

HIV infection should be considered in the differential diagnosis of infectious mononucleosis. This should particularly be considered if the patient is a member of a high-risk group — homosexual or bisexual men, intravenous drug users, or their sexual partners. A small subgroup of patients may have sudden onset of fever, myalgia, lethargy, sore throat, arthralgia, lymphadenopathy, and a truncal maculopapular rash. Some patients have had aseptic meningitis and other neurological manifestations. The illness lasts three to 14 days, and usually occurs two to four weeks after exposure to the virus. Because of this early presentation, antibody to HIV may not be detected initially, although antigen levels tested in research laboratories are usually extremely high. There is no specific therapy for acute disease.

Early Symptoms of HIV Infection

Acute infection is followed by a latent period during which infected individuals are asymptomatic and appear healthy. The duration of this latent period — which is sometimes referred to as the incubation period of AIDS — is variable, ranging from 18 months to over 10 years, with a mean of five years. Later in infection, as the level of T4 lymphocytes declines, symptoms may occur. However, patients may come to their primary physicians with complaints that are not immediately recognized as being due to HIV disease.

Persons infected with HIV are particularly prone to development of skin complaints. The reason is unknown, but infection of the epidermal Langerhans cells may be a contributory factor. Skin conditions seen frequently in HIV disease are listed in Table 1. Although, clearly, every new patient with psoriasis is not infected with HIV, the onset of severe psoriasis, eczema, or folliculitis in a previously healthy adult should raise the possibility of HIV as an underlying factor. Furthermore, reactivation of herpes zoster (shingles) may also be a sentinel of HIV infection. A particularly common complaint is xeroderma, or dry skin, which may be associated with pruritus.

Patients in this stage may also have localized or generalized lymphatic enlargement. Human immunodeficiency virus disease should also be suspected in cases of unexplained anemia or with isolated thrombocytopenia. Other laboratory abnormalities that may be encountered in this phase are mild elevations of the transaminases (with alkaline phosphatase remaining normal), mild increase in gamma globulin, and decreased serum cholesterol.

Although most opportunistic infections occur at a time of severe immunodeficiency and are characteristic of AIDS, tuberculosis is an exception, and may occur in HIV-infected patients whose immune function is only mildly impaired (i.e. in the "asymptomatic" phase). Consequently, HIV infection should be considered whenever a previously healthy young adult or adolescent develops pulmonary tuberculosis.

AIDS-Related Complex

AIDS-related complex (ARC) is a syndrome that signals progressive HIV-induced damage in a patient who has not yet developed an AIDS-defining illness. The conditions that characterize ARC are listed in Table 2. These conditions clearly vary in severity, and patients with ARC will vary from mildly symptomatic to severely ill. Furthermore, it is important to realize that ARC is not necessarily a milder form of infection than AIDS. Patients with ARC who have severe fatigue, diarrhea, and weight loss may be much more disabled and ill than a patient who has recovered from an episode of *Pneumocystis carinii* pneumonia, who has consequently been diagnosed with AIDS.

Table 3
AIDS-Defining Illnesses

a. Secondary infectious diseases
- *Pneumocystis carinii pneumonia*
- Chronic cryptosporidiosis
- Cryptococcosis
- Extrapulmonary tuberculosis
- Extraintestinal strongyloidiasis
- Disseminated *Mycobacterium avium* infection
- Chronic mucocutaneous or disseminated herpes simplex
- Progressive multifocal leukoencephalopathy
- Toxoplasmosis
- Esophageal candidiasis
- Disseminated histoplasmosis
- Cytomegalovirus infection
- Isosporiasis

b. Secondary cancers
- Kaposi's sarcoma
- Non-Hodgkin's lymphoma
- Primary lymphoma of the brain

AIDS

By now most physicians are familiar with the infections and malignancies, listed in Table 3, that define AIDS. These will be discussed in greater detail in subsequent articles.

HIV-Associated Neurological Disease

The nervous system may be primarily involved in any stage of HIV infection, although which cells are actually infected by the virus remains unclear. Acute primary infection may be complicated by aseptic meningitis, encephalitis, myelitis, or the Guillain-Barre syndrome. Later, patients may present with peripheral neuropathies, both motor and sensory, or with spinal cord syndromes, resembling subacute combined degeneration of the cord. By far the most common form of neurological disease, however, is HIV-associated dementia. In its earliest form, this may appear as a complaint of generalized mental slowing, difficulty concentrating, and forgetfulness — which must be differentiated from the depression that often accompanies HIV infection. In the later stages, patients with dementia have profound deficits in cognitive, motor, and sensory functions and may be totally unable to care for themselves. The manifestations and management of primary HIV infection of the nervous system will be reviewed in greater detail in a future article.

Conclusion

In previous eras, diseases such as syphilis and bacterial endocarditis were termed "great mimickers" because patients with these illnesses developed diverse symptoms involving different organ systems, thus presenting diagnostic enigmas. Human immunodeficiency virus infection has assumed the role of "mimicker" in our age, but with increasing awareness of its manifestations, early diagnosis and early intervention may be possible.

Further Reading

Adler MW: ABC of AIDS: Range and natural history of infection. *Br Med J* 1987;294:1145.

Abrams DI: The pre-AIDS syndromes: Asymptomatic carriers, idiopathic thrombocytopenic purpura, persistent generalized lymphadenopathy, AIDS-related complex. *Infec Dis Clin N Amer* 1988;2:343.

The Author

WILLIAM G. POWDERLY, M.D.

Dr. Powderly is clinical director of the AIDS Clinical Trials Unit in the Department of Medicine, Washington University School of Medicine, St. Louis, Missouri.

Supported by PHS grant AI-25903.

Reprints not available.

Editor's Note: This is the first in a series of articles on HIV infection and AIDS to be published in *Missouri Medicine.*

Determination of Death by Neurological Criteria

John J. Oro, M.D.
Columbia, Missouri

Since 1981, Missouri law has defined death as occurring when cardiopulmonary function has ceased or when all brain and brain stem function is totally and irreversibly lost. The author reviews the current published guidelines for the determination of death by neurological criteria in order to assist physicians making the evaluation.

In ancient times, the presence of death was established by the absence of breathing and heartbeat. This concept remained unchanged until recent times, when medical technology produced life support systems. In 1902, Harvey Cushing operated on a patient with a brain abscess.[1] He reported, "The abscess was difficult to find ... and in the course of our search, during elevation of the temporal lobe which was suspected to harbor it, the respiration ceased. The medullary center, evidently suffering already from compression effects, could not endure this additional burden ... the heart continued to beat for twenty-three hours, during which time artificial respiration was continued."

This first report of keeping a patient without neurological function alive by artificial means was a harbinger of the ensuing difficulties in establishing death in recent times.

With a greater ability to support the respiratory system mechanically during the 1950s, maintaining patients without brain function on ventilators became a practical and ethical problem. Should these patients be considered alive and thus supported indefinitely, or should they be considered in another state that would be best managed by the withdrawal of mechanical support? Anesthesiologists closely involved in the care of these patients presented this dilemma to Pope Pius XII. His response was given on November 24, 1957, at the International Congress of Anesthesiologists.[2]

In his address, "The Prolongation of Life," Pope Pius stated, "It remains for the doctor ... to give a clear and precise definition of 'death' and the 'moment of death' of a patient who passes away in a state of unconsciousness."[3] Physicians responded with a surge of concept development, research, application and controversy. In 1959, French physiologists studying patients with cardiopulmonary function, but without neurologic function, coined the term "coma depasse," meaning "beyond coma" or "ultra-coma," to describe the state.[4-6] These were some of the first attempts to describe the state now called "brain death."

During the 1960s, the increased use of artificial cardiopulmonary support, the demand for organs for transplantation, and the ethical issues raised by prolonged care of patients with no brain function led to further efforts to set guidelines for the determination of "brain death." This resulted in the 1968 report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death. Brain death was defined as irreversible coma, with an isoelectric EEG, and absence of movement, breathing and reflexes.[7] Since that landmark report, many other studies have refined the "brain death" concept. The most notable of these studies

Table 1.
Determination of Death by Neurological Criteria

I. Cessation of all brain and brain stem function must be total.

- A. There must be deep coma
- B. Brain stem reflexes must be absent
    - 1. Pupillary reflex
    - 2. Oculocephalic reflex
    - 3. Oculovestibular reflex
    - 4. Corneal reflex
    - 5. Oropharyngeal reflexes (cough and gag)
    - 6. Respiratory (apnea) reflex
- C. Peripheral nervous system and spinal cord reflexes may persist

II. Loss of all brain and brain stem reflexes must be irreversible.

- A. The cause of coma must be established
- B. Complicating condition must be excluded
    - 1. Drug and metabolic intoxication
    - 2. Hypothermia
    - 3. Shock
- C. Appropriate period of observation
    - 1. Six hours with confirmatory tests
    - 2. Twelve hours without confirmatory tests
    - 3. Twenty-four hours in anoxic brain injury (can be reduced if confirmatory tests are used)
- D. Confirmatory tests
    - 1. EEG
    - 2. Cerebral radionuclide angiography
    - 3. Cerebral angiography

Table 2.
Testing of Brain Stem Reflexes

Pupillary reflex: A strong source of light is directed to each pupil sequentially and change in pupil size observed. Reaction of pupil excludes brain death.

Oculocephalic reflex: The patient's head is moved suddenly from side to side. Movement of the eyes within the orbit excludes brain death.

Oculovestibular reflex: The head is elevated to 30° and ice water irrigated in each ear sequentially and movement of the eyes toward the irrigated ear observed. Movement of the eyes excludes brain death.

Corneal reflex: Each cornea is touched lightly with cotton or facial tissue. Movement of the eyelid excludes brain death.

Gag reflex: The back of the pharynx is touched with a tongue depressor or the endotracheal tube is moved. Movement of the uvula or retching excludes brain death.

Cough reflex: A suction catheter is passed through the endotracheal tube into the tracheobrachial tree. Coughing excludes brain death.

Apnea reflex: The apnea reflex test (Table 3) is performed only when all the above reflexes are absent.

are the 1972 U.S. Collaborative Study of Cerebral Death,[8] the Medical Consultants to the President's Commission for the Study of Ethical Problems in Medical and Biomedical and Behavioral Research report of 1981,[9] and the 1987 Guidelines for the Determination of Brain Death in Children.[10]

In 1981, the Missouri General Assembly passed a law "relating to the determination of human death."[2] Containing only three paragraphs, the law set minimal conditions and allowed medical practice to define the methods of the determination of death:

> **Section 1:**
>
> For all legal purposes, the occurrence of human death shall be determined in accordance with the usual and customary standard of medical practice, provided that death shall not be determined to have occurred unless the following minimal conditions have been met:
>
> (1) When respiration and circulation are not artificially maintained, there is an irreversible cessation of spontaneous respiration and circulation; or
>
> (2) When respiration and circulation are artificially maintained and there is a total and irreversible cessation of all brain function, including the brain stem, and that such determination is made by a licensed physician.

Part 1 of the law relates to death as defined traditionally. Part 2 refers to "brain death," with the key words being *total* and *irreversible* loss of all *brain*, including *brain stem* function.

Neurological Criteria

From a review of the published guidelines and Missouri state law, neurological criteria for the determination of death have been developed (Table 1). While the law requires that the physician be licensed, standard medical practice also requires that the physician be familiar with the following guidelines for determination

Table 3.
Apnea Testing

Harvard Ad Hoc Com	-ventilate with room air for 10 minutes -maintain normal CO_2 tension -disconnect ventilator for 3 minutes
Collaborative Study	-no respiratory effort while being ventilated for 15 minutes
President's Commission	-ventilate with 100% FiO_2 for 10 minutes -passive flow of O_2 -disconnect ventilator for 10 minutes -blood gas studies can confirm
Apneic Oxygenation[12]	-obtain baseline PCO_2 of 40 mmHg -ventilate with 100% FiO_2 for 15 minutes -disconnect ventilator and oxygenate with cannula down endotracheal tube at 6 liters O_2/min -continue until PCO_2 of 60mmHg, or cardiovascular instability

of death by neurological criteria and be experienced with the clinical tests required for its determination.

1. **There must be total cessation of all brain and brain stem function.** The patient must be in deep coma, which, as defined by the Harvard Commission, is a state of "unreceptivity and unresponsivity. There is total unawareness to externally applied stimuli and inner need and complete unresponsiveness."

Complete inactivity of the brain stem is determined by absence of pupillary, oculocephalic, oculovestibular, corneal, oropharyngeal (gag and cough), and respiratory (apnea) reflexes (Table 2). The apnea reflex is the last to be tested and is tested only if the other reflexes are absent (Table 3). All six reflexes must be absent in "brain death."

These guidelines and Missouri law refer only to brain and brain stem activity and not to spinal cord or peripheral nerve activity. Thus, peripheral nervous system and spinal cord reflexes may persist after death.[9] In addition, it is possible to see stereotyped rigor movements during apnea testing, or when the ventilator is finally removed.[10]

2. **Loss of all brain and brain stem activity must be irreversible.** To assess whether the loss of all brain and brain stem function is irreversible, the cause of coma must be established. The cause may be determined from the history and clinical examination or from CT scans of the brain, measurement of core body temperature, drug screening tests, EEG, angiography or other procedures. If the cause of coma cannot be established, the period of observation is lengthened or a test to confirm brain death is performed.

Table 4.
Observation Period and Confirmatory Tests in Children

7 days — 2 months	2 examinations and 2 EEGs 48 hours apart*
2 months — 1 year	2 examinations and 2 EEGs 24 hours apart*
Over 1 year	2 examinations 12 hours apart (hypoxic-ischemic-encephalopathy - 24 hours)

*Repeat examination and EEG not necessary if CRAG shows nonvisualization.

While initial brain death examination is performed to determine the absence of all brain and brain stem function, following an appropriate period of observation, a repeat examination is performed to confirm that the condition is irreversible. The Harvard report recommended observation for 24 hours along with an isoelectric EEG. As experience has grown, the following guidelines have become generally accepted. In medical centers with experience in brain death determination, a six-hour period between examinations is acceptable if a confirmatory test such as EEG or cerebral blood flow assessment is used. However, if the period of observation is increased to 12 hours, no confirmatory tests are required. If the cause of brain death is hypoxic-ischemic encephalopathy, a 24-hour observation period is required, which can be reduced if EEG or cerebral blood flow studies are performed.

The most commonly used test to confirm brain death is the EEG. A patient without brain function will have electrocerebral silence ("flat line" EEG). However, in rare cases, electrocerebral silence may be present even though there is residual brain stem activity. Thus, it is mandatory that the EEG not be used by itself but only as support for a clinical examination that has documented the absence of all brain and brain stem function. In addition, accurate interpretation of the EEG requires that it be performed in accordance with the strict criteria set by the American Electroencephalographic Society.[13]

Cerebral blood flow studies used to confirm brain death include cerebral angiography and cerebral radionuclide angiography (CRAG). On cerebral angiography, brain death is documented by the lack of blood flow to the brain through the carotid and vertebral arteries. Cerebral radionuclide angiography is being used increasingly on our service when a confirmatory test is indicated. On CRAG, the absence of perfusion of the brain tissue results in an "empty cranium" appearance, surrounded by a rim of uptake representing blood flow through the scalp.

Guidelines for determination of brain death in children have recently been developed by a task force composed of one member from the American Bar Association, and two members each from the American Academy of Neurology, American Academy of Pediatrics, American Neurological Association, and the Child Neurology Society.[11]

These guidelines apply to children older than 1 week of age because neurological evaluations were considered unreliable in younger children. Except for the period of observation and the use of confirmatory tests, the guidelines are similar to those used in adults (Table 4). Children from seven days to two months of age should have two examinations and two EEGs 48 hours apart, while children from two months to one year of age should undergo two examinations and two EEGs 24 hours apart. A repeated examination and EEG are most necessary if a CRAG study demonstrates no cerebral perfusion. The guidelines for children more than one year old are the same as for adults.

In summary, brain death is present when an experienced physician demonstrates by clinical examination over an appropriate period of observation the absence of all brain and brain stem function, in a patient in whom the cause of coma is known and complicating conditions have been excluded. Confirmatory tests are used to shorten the observation period, when a complete examination cannot be obtained, when the cause of coma is unknown, or when the patient is under the age of 1 year.

Unitary Concept of Death

Various reasons have been proposed to explain the value of the brain death concept. These include the high cost to society of maintaining patients who have no hope of recovery, the existence of limited health care resources, and the need for organs for transplantation. However, the fundamental reason for the concept of brain death is that "... in the circumstance of brain death, neither a human being or person any longer exists."[14]

In addition, "... it is an affront to the individual person or that person's memory to treat a human being who has irreversibly lost all brain function as if he were alive. It confuses the person with his corpse and is morally wrong."[14]

The concept of brain death has allowed us to clarify our thinking in this age of mechanical respiratory support. However, it is time to go beyond this concept. Ethical, religious, medical, and legal thought supports the concept that death can be determined by either the absence of respiration and circulation *or* the absence of all brain function. Therefore, "brain death" *is* death. By educating ourselves and the public that "brain death" is death, some of the burden involved in the awkward moment of disconnecting life support machines can be eased.

References

1. Cushing H: Some experimental and clinical observations concerning states of increased intracranial tension. *Am J Med Sci* 1902;124:375-400.
2. *Relating to the Determination of Human Death, An Act.* Bill No 1223, 81st Missouri General Assembly.
3. Pius XII: The prolongation of life. *Pope Speaks* 1958;4:393-398.
4. Fischgold H, Mathis F: Obnubilations, Comas et Stupeurs. Paris, France, Masson and Cie, 1959.
5. Jouvet M: Electrosubcorticographic diagnosis of the death of the central nervous system in certain comas. *Clin Neurophysiol* 1959;11:805-808.
6. Mollaret P, Goulon M: Le coma depasse: (Mpreliminaire). *Rev Neurol* (Paris) 1959;101:3-15.
7. Beecher HK: A definition of irreversible coma: Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death. *JAMA* 1968;205:337-340.
8. An appraisal of the criteria of cerebral death: A summary statement: A collaborative study. *JAMA* 1976;237:982-986.
9. Guidelines for the determination of death: Report of the medical consultants on the diagnosis of death to the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. *JAMA* 1981;246:2184-2186.
10. Ropper AH: Unusual spontaneous movements in brain-dead patients. *Neurol* 1984;34:1089-1092.
11. Task Force for the Determination of Brain Death in Children: Guidelines for the determination of brain death in children. *Arch Neurol* 1987;44:587-588.
12. Benzel ED, Gross CD, Hadden TA, et al.: The apnea test for the determination of brain death. *J Neurosurg* 1989;71:191-194.
13. American Electroencephalographic Society: Guidelines in EEG. *J Clin Neurophysiol* 1986;3:131-168.
14. Veith FJ, Fein JM, Moses DT, et al: Brain death: A status report of medical and ethical considerations. *JAMA* 1977;238:1651-1655.

The Author

JOHN J. ORO, M.D.

Dr. Oro is an assistant professor in the Division of Neurosurgery, Missouri University School of Medicine, Columbia.

Reprints

John J. Oro, M.D.
Division of Neurosurgery
N522 Health Sciences Center
1 Hospital Drive
Columbia, Missouri 65212

Impotence: Its Evaluation and Treatment

Barry E. Gordon, M.D.
Stephen H. Weinstein, M.D.
Columbia, MO

More men are seeking treatment for impotence today. Recent advances have resulted in a better understanding of the problem, and a wider array of treatment options. The authors review the pathophysiology of the condition and provide an algorithm for evaluating patients with impotence.

"Impotence, the most prevalent failure of human life."
— *S. Freud*

Although Freud's quote may be an exaggeration in the statistical sense, it is increasingly recognized that sexuality plays an integral role in an individual's emotional, physical and mental well-being. Among the general public, interest in impotence is increasing, and more men are seeking evaluation and treatment. Not infrequently, it is the primary care physician who first sees the patient with complaints of sexual dysfunction. The understanding and clinical evaluation of impotence, when approached systematically, need not be difficult. New modalities developed over the past several years have expanded the treatment options for physician and patient. This article will present an overview of the problem of impotence, outlining its pathophysiology, etiology, evaluation and subsequent treatment.

Impotence is defined as the inability to obtain or maintain an erection sufficient for intromission and satisfactory completion of sexual activity more than 25% of the time. It is exclusively a male disorder. Inhibited sexual excitement in females, termed frigidity, has unclear physiologic correlates to impotence. Likewise, the problem of impotence has no direct physiologic or clinical relationship with the concepts of either orgasm or fertility, both of which may be abnormal despite normal erectile function. The incidence of impotence is surprising: 10 million males in the United States (one in 10) suffer from the disorder. Among patients with multiple medical problems or on multiple medications, this ratio is undoubtedly higher.

Physiology

To better appreciate the many causes of impotence, it is beneficial to review the basic physiology of penile erection. A complex interaction of four types of body functions (arterial, neurological, hormonal and psychological) contribute to normal erectile response. Any disturbance within this circuit, be it organic or functional, may cause dysfunction. In a simplified sense, an erection occurs when the influx of blood into the corpora cavernosa exceeds the efflux. This results in increased pressure within this spongy tissue, causing penile tumescence (swelling with increased penile circumference) and rigidity (inflexibility). Blood enters the corpora cavernosa via the penile artery, which is derived from the internal iliac artery, and exits from two or three main sets of veins. Neurological, hormonal and psychological factors modulate the arterial and venous flow, providing conscious and subconscious control over the normal response. The exact mechanisms of control and the neurotransmitters involved are areas of current research. It is believed that the nervous system serves the greater regulatory role. All levels of the central and peripheral nervous system may contribute to the erectile response. Motor and sensory fibers are carried principally along the sacral parasympathetic (pudendal) nerves, with additional excitatory and inhibitory input originating in higher cortical centers.

The contribution of the hormonal milieu to achieving and maintaining erection is less clearly understood. Testosterone, the male hormone manufactured primarily in the testis by the Leydig cells and responsible for most male secondary sex characteristics, is known to play a role, but the androgen is believed to exert a greater influence on libido than potency.[1] Prolactin, a protein secreted from the anterior pituitary (primarily responsible for milk secretion in women), may have a marked effect on erectile capacity, via mechanisms as yet unknown. Hyperprolactinemia is very rare, but more than 90% of men with the disorder have sexual or reproductive dysfunction.[2] Abnormalities in thyroxin, both hypo- and hyper-, are known to affect potency, as well as GnRH (gonadotropin releasing hormone), via its regulatory role over the pituitary gland.[3]

Etiology

In evaluating the etiology of impotence, it is beneficial to classify the disorder into subsets, thereby providing a framework for directing further evaluation and treatment. The most useful approach delineates impotence clinically as either organic or psychogenic.

The potential causes of impotence are legion (Table 1), and this review cannot detail them all. The disorder is frequently found in the profile of many systemic illnesses associated with age. However, age in and of itself should not be viewed as the sole cause of impotence; possible reversible causes should also be considered. With age comes a progressive decline in sexual interest and performance. But this decline is multifactorial, involving changes in the psyche as well as in the hormonal, vascular and neurologic makeup.[4]

Depending on the patient population evaluated, it is generally found that 50% of all impotence is due to organic causes.[5] Vascular insufficiency is the end mechanism that leads to organic impotence in most common disorders. Notably, it is manifest in the hypertensive patient with atherosclerosis, in patients with other types of vascular disease, and in diabetic patients, where there is a probable neuropathic as well as microangiopathic component.[6] In the diabetic population, impotence is widespread, with a prevalence rate of 50% among adults. In fact, diabetes mellitus may be the single most frequent cause of erectile dysfunction in the United States today.[1] It is more common than either retinopathy or nephropathy and, not infrequently, is the undiagnosed diabetic's presenting complaint.[7]

Table 1

Potential Causes of Impotence

I. Vascular Insufficiency:
  - hypertension
  - diabetes mellitus

II. Drugs:
  - antihypertensives
  - tricyclic antidepressants, psychotropics
  - chemotherapeutics
  - alcohol and other "recreational" drugs
  - cimetidine

III. Hormonal:
  - testosterone deficiency
  - pituitary dysfunction (GnRH, prolactin)
  - hypogonadotrophic hypogonadism
  - thyroid dysfunction
  - hyperprolactinemia

IV. Neurologic Mechanisms:
  - cerebrovascular accident
  - multiple sclerosis
  - spinal cord injuries, surgical procedures
  - diabetes mellitus

V. Iatrogenic:
  - pelvic surgery (e.g. radical prostatectomy, cystectomy)
  - arterial bypass procedures
  - renal transplantation
  - pelvic irradiation

VI. Miscellaneous:
  - end-stage renal disease
  - Peyronie's disease

VII. Psychogenic:
  - fatigue
  - performance anxiety

Drugs,[8] prescription and non-prescription, contribute to 25% of all organic impotence. Antihypertensive medications, widely used in the general population, are frequent offenders. The mechanism by which each individual agent may cause impotence is poorly understood. Importantly, the side effect may disappear when the patient is switched to a different agent. Among the antihypertensive drugs, Angiotensin Converting Enzyme (ACE) inhibitors and calcium antagonists are the only two classes of agent that do not include impotence as part of their side-effect profile. Other commonly used drugs that have the potential for causing impotence include cimetidine (a histamine H_2 receptor antagonist that causes impotence via its anti-androgenic properties and secondary hyperprolactinemia), several psychotropic agents (including antidepressants, sedatives, anti-psychotics and monoamine oxidase inhibitors), and various chemotherapeutic agents. Of the non-prescription drugs, alcohol is the most frequently abused agent that causes impotence, probably via psychologic and neuropathic mechanisms. Other recreational drugs, by way of CNS depression, may have impotence as a side effect. In contrast with other organic causes, impotence due to medications is frequently reversible after discontinuation of a drug or reduction in dosage.

The psyche frequently plays a major role in erectile dysfunction. Psychological factors affecting potency may include such common problems as depression, performance anxiety, fatigue and marital discord. Again, such problems typically prove to be reversible and are only temporary causes of impotence.

Evaluation

In approaching the evaluation of impotence (Fig 1), it is important first to clarify and define the problem, generally via discussion with the patient and his partner. Patients may be reluctant to discuss sexual dysfunction unless the subject is first broached by the physician.

The physician should determine that the patient's complaint is indeed that of erectile dysfunction and not a separate, but frequently confused, disorder such as premature ejaculation. A good history is the single most important element in beginning the assessment. A detailed history should suggest possibilities for further evaluation and should preclude needless laboratory tests and studies. The history should include assessment of whether the onset of the problem was abrupt or insidious, the length of time impotence has been present, any association with decreased libido, the presence of morning erections or erections with masturbation, and the patient's self-assessment of the problem. Physical examination should include assessment of the patient's overall sexual development, examination of the genitalia with attention to testis size and bulbocavernosus reflex (increased anal sphincter tone from penile stimulation), and an overall evaluation of the vascular and endocrine systems (general habitus, hair pattern, breast tenderness or enlargement). Laboratory tests will identify common and potentially reversible causes and should include measurement of serum glucose and testosterone levels. If no likely cause is suggested, further evaluation by nocturnal penile tumescence (NPT) testing is warranted.

Although the sensitivity varies depending on the method, NPT testing is the single best non-invasive test to differentiate organic from psychogenic impotence.[9] In the normal male, three to five erections occur each night in association with REM sleep. These may be directly quantitated by one of two means. The most widely-used method of measuring NPT is the snap gauge,[10] consisting simply of a band fastened with Velcro around the penis. The gauge's three plastic bridges are designed to break with increasing penile expansion and turgor. The "snap-gauge study" is conducted over one to three nights and may be performed at home.

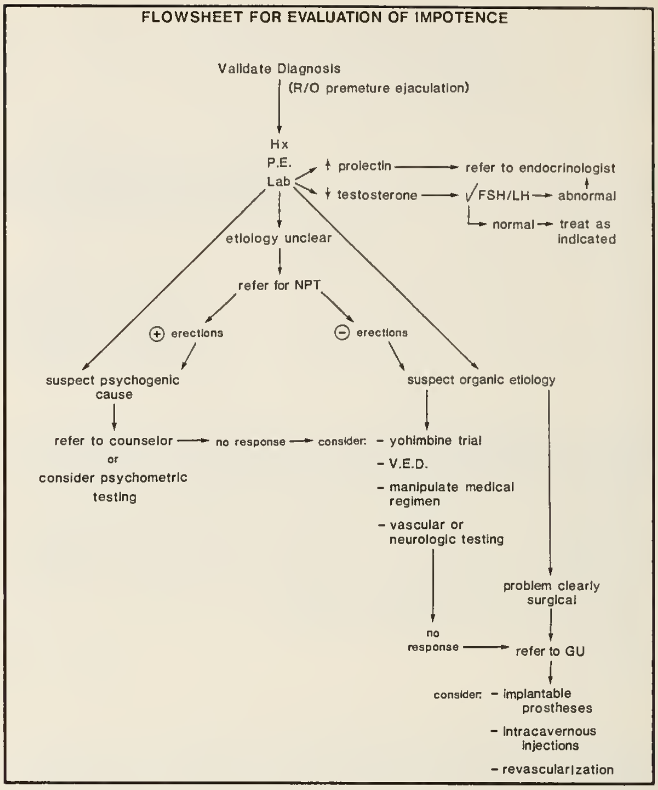

FLOWSHEET FOR EVALUATION OF IMPOTENCE
Validate Diagnosis
(R/O premeture ejaculation)
Hx
P.E.
Lab
↑ prolactin
refer to endocrinologist
↓ testosterone
√FSH/LH
abnormal
normal
treat as indicated
etiology unclear
refer for NPT
⊕ erections
⊖ erections
suspect psychogenic cause
suspect organic etiology
refer to counselor
or
consider psychometric testing
no response
consider:
- yohimbine trial
- V.E.D.
- manipulate medical regimen
- vascular or neurologic testing
problem clearly surgical
no response
refer to GU
consider:
- implantable prostheses
- intracavernous injections
- revascularization

Fig 1.

A more accurate method for quantitating NPT is the computerized "Rigiscan." This apparatus measures expansion at the penile base and tip and, via a computer algorithm, arrives at a more meaningful measure of penile rigidity,[11] the determining factor for vaginal penetration. The Rigiscan has been shown to be reliable, easy and convenient for home use. Although it is expensive and not yet widely available, it may become the method of choice for assessing NPT.

Further specialized studies, such as penile artery doppler, papaverine injection, or nerve conduction testing, may also be required. An important caveat in the evaluation of impotence is that frequently the cause is multifactorial, and even if there is an initially obvious cause, other possible causes should be explored before initiating treatment.

Treatment

Whenever possible, treatment of impotence should be directed toward the underlying cause. Unfortunately, correction or treatment of the precipitating problem does not always restore potency. Prior to undertaking treatment, the patient should possess, as a prerequisite, a healthy attitude and approach toward sexuality. For psychogenic impotence, referral to a qualified counselor or therapist is indicated. Most counselors currently take a behavioral-oriented approach incorporating both sex therapy and "marital" therapy. Success rates of 60% to 80% have been achieved in selected couples.[1]

Medically, the treatment of impotence may be approached at several levels. If the history and time course indicate a medication side effect, manipulation of the medical regimen should always be considered. If the evaluation leads one to suspect the problem is due to decreased testosterone, a course of IM testosterone, 200 mg each week for one month, would constitute an adequate therapeutic trial. An elevated prolactin level should warrant referral to an endocrinologist for further evaluation and possible treatment with bromocriptine.

A new agent in the armamentarium for the treatment of both organic and psychogenic impotence is yohimbine, an alpha-2 receptor antagonist.[12] Initial studies report a response rate of 26% to 46%. Although the drug's exact mechanism of action is not known, it is speculated that the agent may increase sympathetic outflow. Reported side effects, when used at the recommended dosage, are few, but include nausea, headache, hypertension, tachycardia and irritability.[13]

The Vacuum Erection Device (VED) is a non-medical, non-surgical approach to the treatment of impotence, employing suction to obtain an erection. Basically, the system consists of a cylinder, into which the flaccid penis is inserted, and a hand-powered vacuum pump which draws blood into the penis encased in the cylinder. Once an adequate erection has been obtained, rubber bands are placed around the base of the penis, thereby retaining the blood and hence the erection. The penile base remains flaccid. The VED is available from several manufacturers, is theoretically useful for impotence from all causes, costs approximately $300 and is available only by prescription. Although the mechanical aspects of the system may deter some, the device has few serious side effects and patient satisfaction is greater than 90%.[14]

Impotence problems not immediately amenable to psychiatric or medical treatment, or those for which attempts at treatment fail, warrant referral to a urologist. Surgical treatment options include, most commonly, implantable penile prostheses, injection of vasodilators into the corpora cavernosa and, when indicated, revascularization procedures.

Implantable penile prostheses have come a long way since the 1940s when a portion of rib cartilage was first implanted into the penis as an artificial splint. Today, a variety of different prostheses are available. Probably the most commonly implanted prosthesis is the semirigid rod, or malleable penile prosthesis. Malleable prostheses typically cost the least and allow for the shortest hospital stay. Their main disadvantage is that the prosthesis causes a constant semi-erection that may be difficult to conceal. Inflatable prostheses, first introduced in 1973, have the advantage of allowing for alternate penile flaccidity and rigidity, but technically are more difficult to implant, are more prone to breakdown, and are more expensive. Recently, new prototypes have been developed with special hydraulic or mechanical features. Such prostheses may prove superior in that they allow alternate penile flaccidity and rigidity, and do not have the problems of permanent rigidity, concealment, or the need to adjust penile position to body position changes. The prostheses are also totally contained within the corpora cavernosa, providing a technically-easier implantation. For all types of prostheses, the mechanical breakdown and surgical failure rate is considerably less now than that of just a decade ago. However, it is important to note that once a prosthesis has been implanted, the corpora cavernosa are, by necessity, hollowed out. Some future treatment modalities may be precluded.

A new treatment option for those with impotence of psychogenic, vascular or neurogenic origin is intracorporal injection of vasodilator agents.[15] Such injections are nearly painless and, after proper instruction, many patients become comfortable with self-injection. Current preparations include papaverine, a smooth muscle relaxant, and phentolamine, an alpha-adrenergic blocker.[16] Initial studies report a greater than 80% response rate, although long-term effectiveness and safety are unknown. The most common side effects include bleeding at the injection site and prolonged, painful erection (priapism). This emergency requires treatment with an alpha-agonist or aspiration of blood from the corpora. Increasingly, intracorporal injections are being used as a diagnostic as well as therapeutic modality.

At the current time, revascularization procedures are seldom done in this country. The flow sheet (Fig 1) summarizes and details one possible approach to the overall evaluation of impotence.

Increasingly, many medical centers are adopting a multidisciplinary approach utilizing a urologist, psychiatrist, endocrinologist, and other specialists as indicated.[17] Such an approach provides an efficient, cost-effective method to deal with this common and frequently devastating disorder. Additionally, a team concept allows the combination of treatment methods, while eliminating inappropriate and repetitive testing. Such an approach may prove to be effective, but it is certainly not the only approach. The first physician to see a patient with sexual dysfunction is usually an internist or family physician. As outlined here, the initial evaluation and treatment of impotence is within the realm of nearly all primary practitioners. The patient's improved well-being, psychologically and physically, will be the end result.

References

1. Walsh, P.C. et al (eds): *Campbell's Urology*, ed 5. Philadelphia, WB Saunders and Co., 1986, pp 708-709, 711, 728.
2. Perryman RL, Thorner MO: The effects of hyperprolactinemia on sexual and reproductive function in men. *J Andro* 1981;5:233.
3. Kidd GS, et al: The hypothalamic-pituitary-testicular axis in thyrotoxicosis. *J Clin Endo Metab* 1979;48:798.
4. McClure RD: Endocrine evaluation and therapy of erectile dysfunction. *Urol Clin N Amer* 1988;15:1,53.
5. Montague DK, et al: Diagnosis, evaluation, classification and treatment of men with sexual dysfunction. *Urology* 1979;14:545.
6. Saenz de Tejada I, Goldstein I: Diabetic penile neuropathy. *Urol Clin N Amer* 1984;15:1,17.
7. Ellenberg M, et al: Diabetic neuropathy presenting as the initial clinical manifestation of diabetes. *Ann Intern Med* 1958;49:620.
8. The Medical Letter of Drugs and Therapeutics. 1987;29:744.
9. Karacan I: Clinical value of nocturnal erections in the prognosis and diagnosis of impotence. *Medical Aspects of Human Sexuality* 1970;4:27.
10. Ek A, et al: Nocturnal penile rigidity measured by the snap gauge band. *J Urol* 1983;129:964.
11. Sidi AA, Lange PH: Recent advances in the diagnosis and management of impotence. *Urol Clin N Amer* 1986;13:3,489.
12. Reid K: Double-blind trial of yohimbine in treatment of psychogenic impotence. *Lancet* 1987;2:8556,421.
13. Morales A, et al: Nonhormonal pharmacologic treatment of organic impotence. *J Urol* 1982;128:45.
14. Witherington R: Suction device therapy in the management of erectile impotence. *Urol Clin N Amer* 1988;15:1,123.
15. Sidi AA, et al: Intracavernous drug-induced erections in management of male erectile dysfunction. *J Urol* 1986;135:704.
16. The Medical Letter of Drugs and Therapeutics. 1987;29:751.
17. Jacobs J, et al: A multidisciplinary approach to the evaluation and management of male sexual dysfunction. *J Urol* 1983;129:35.

The Authors

BARRY E. GORDON, M.D.
STEPHEN H. WEINSTEIN, M.D.

The authors are from the University of Missouri School of Medicine, Columbia, where Dr. Gordon is a resident physician in the Department of Medicine and Dr. Weinstein is associate professor in the Division of Urology, Department of Surgery.

Reprints

Stephen H. Weinstein, M.D.
Department of Surgery, Division of Urology
University of Missouri-Columbia
1 Hospital Drive
Columbia, Missouri 65212

Magnetic Resonance Imaging:

Failure to Demonstrate Spinal Arteriovenous Malformations In Four Patients

Dipak C. Shah, M.D., Randall James, M.D., Akhtar Ashraf, M.D., Angela M. Noto, M.D., and Sara Y. Shull, M.D.
Kansas City, Missouri

Magnetic resonance imaging (MRI), often useful for detecting spinal lesions, was unsuccessful in revealing spinal arteriovenous malformations in four patients, as recorded here. Patients with persistent neurological symptoms after "normal" MRI scans should undergo additional imaging procedures.

Spinal arteriovenous malformations (AVMs) are relatively rare lesions that produce a variety of signs and symptoms and which may be difficult to diagnose.[1-4] The literature contains several case reports in which magnetic resonance imaging (MRI) was used in making the diagnosis.[5-7] We report four patients with spinal AVMs who had normal findings on MRI studies, and in whom the diagnosis was made by myelography and confirmed, in three cases, by angiography.

Methods

Four patients underwent MRI examinations for the investigation of perplexing neurological symptoms. Spin echo MRI techniques were used on all patients. Patient 1 underwent examination using a Diasonics 0.35 Tesla (T) scanner. Body coil images were obtained of the lower thoracic-upper lumbar spine. Sagittal 5 mm images using a TE=40 msec, TR=500 msec and four excitations, as well as sagittal 5 mm images using a double echo technique with TE=40, 80 msec, TR=2000 msec and two excitations were obtained. Patient 2 was also examined with the Diasonics 0.35 T scanner. Spinal coil images of the thoracic spine were obtained using sagittal and coronal 5 mm images with a TE=40 msec, TR=500 msec and four excitations. In addition, sagittal and coronal 5 mm images using a double echo technique with a TE=40, 80 msec and TR=1500 msec were acquired on Patient 2. In Patient 3, images were obtained using a General Electric 1.5 T magnet. The spine was evaluated using body coil images. These images were obtained in sagittal projection using 5 mm scans, a double echo technique with TR=2000 msec, four excitations, FOV= 48 cm, and a 256 X 128 matrix. Patient 4 was scanned with a Philips 0.5 T scanner. Sagittal 5 mm images with TE=30 msec, TR=750 msec, four excitations, FOV=24.6 cm and a 256 X 179 matrix were obtained, followed by sagittal 5 mm images with a double echo technique with a TE=50, 100 msec, TR=2100 msec, two excitations, FOV=24.6 cm and 256 X 179 matrix.

Discussion

Spinal AVMs are congenital abnormal clusters of blood vessels formed as a developmental anomaly of the spinal circulation, in which hamartomatous networks of arteries and veins communicate directly through a capillary bed. Spinal vascular malformations are relatively rare lesions, with an incidence of 3.3% to 11% of spinal tumors.[8,9] This lesion is found three to four

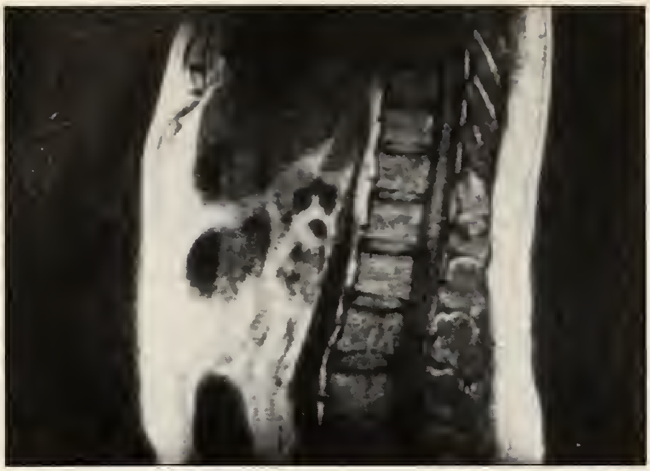


Fig 1A - Patient 1. Sagittal 5mm image with TE=40 msec and TR=500 msec of the thoracolumbar spine is normal.

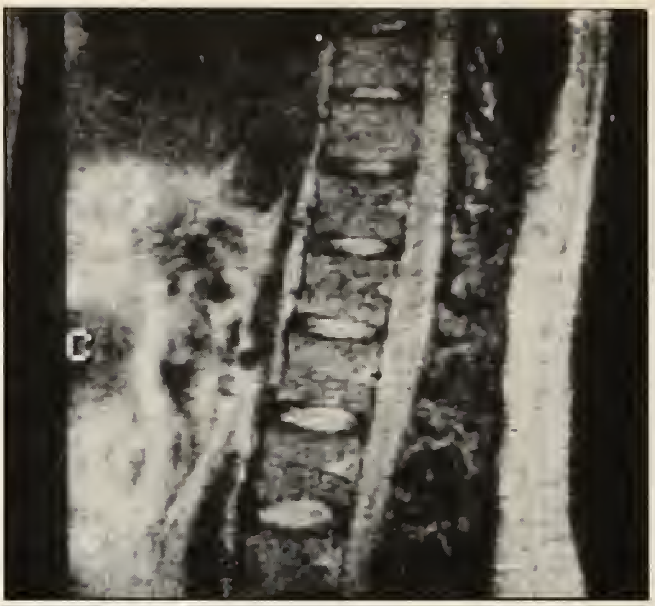


Fig 1B - Patient 1. Sagittal 5mm images using TE=80 msec and TR=2000 msec are also normal.

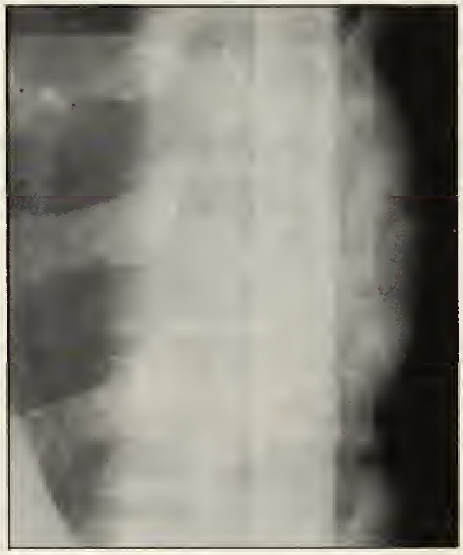


Fig 1C - Patient 1. Serpiginous filling defect is demonstrated in the distal thoracic spinal cord on this metrizamide myelogram.

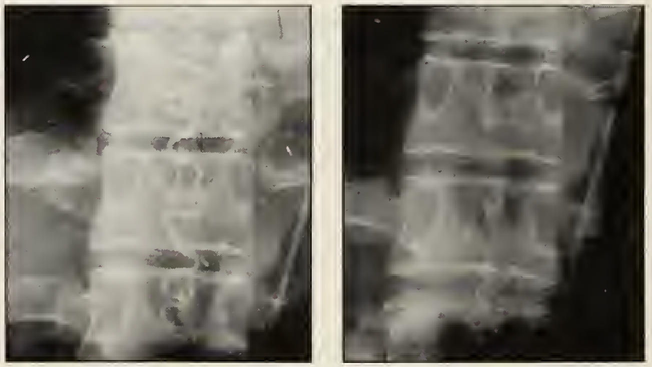


Fig 1D&E - Patient 1. Selective spinal angiogram confirms the presence of the spinal AVM.

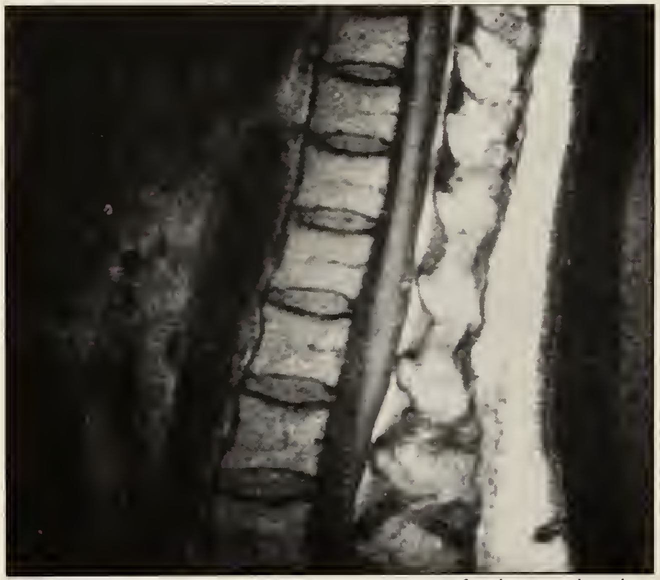


Fig 2A - Patient 2. Sagittal 5mm images of a thoracolumbar spine using TE=40 msec and TR=500 msec is normal.

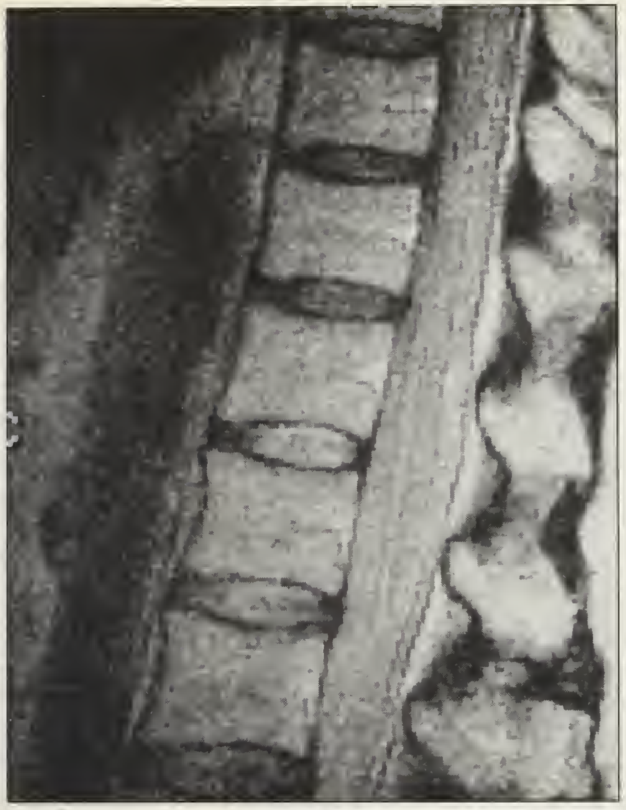


Fig 2B - Patient 2. Sagittal 5mm images with a TE=80 msec and TR=1500 msec is also normal.

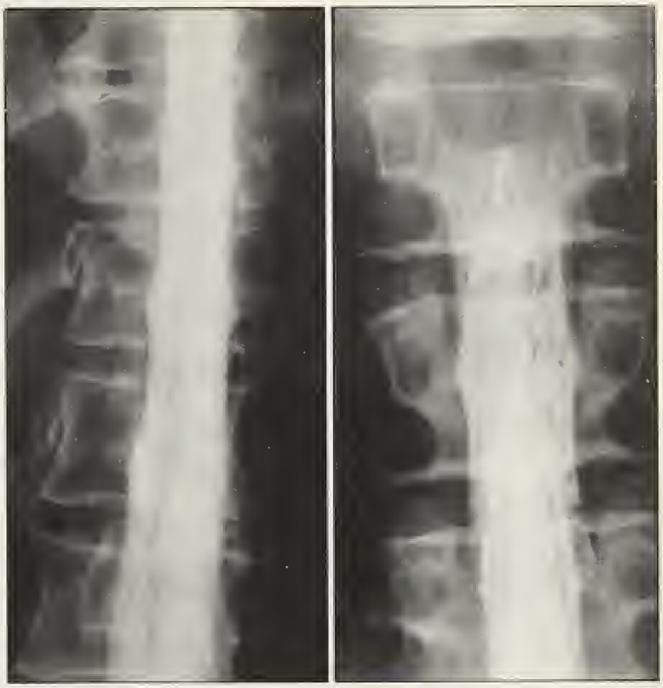


Fig 2C&D - Patient 2. Metrizamide myelogram shows serpiginous filling defects in distal thoracic spinal cord representing spinal AVM.

times more frequently in males than in females. The ratio of cerebral to spinal AVMs is approximately 8:1.[10] They may be intramedullary, intradural, extradural, or subpial in location, or complex, involving different layers.

Clinical Findings

The onset of initial symptoms and signs of spinal AVM is insidious. There is no unique set of symptoms and signs that is pathognomonic of spinal cord AVM. The main clinical symptoms are pain, motor and sensory deficits, and bowel and bladder disturbance. There is often a fluctuating clinical course.[1] Thirty percent of patients have a progressive clinical course, 69% a fluctuating course, and 1% have a catastrophic onset with no remission.[2] Precipitating factors, such as trauma, exertion, heat, overeating and pregnancy, play a role in about one-third of patients with spinal AVM.[3] Pain may be local, radicular, or meningeal and is present in 50% of all cases.[3] Motor deficits involve the upper or lower motor neuron or a combination; there may be spasticity or flaccidity. Sensory changes can be radicular or reflect long tract involvement. Sphincter disturbance is a common complaint, occurring more frequently if the lesion is intradural.[3] Audible spinal bruit is uncommon, but when present, it is pathognomonic. Twenty-five percent of spinal AVMs are associated with other neural and extraneural dysplasias.[4] Differential diagnosis must include multiple sclerosis and motor neuron disease, intradural spinal tumor, cervical or lumbar spondylosis, and disc herniation.[11]

Radiographic Findings

Angiographically, there are three distinct types of spinal AVM, as follows:[12]

Type I — Single, coiled unbranched lesions, commonly seen in adults.
Type II — Plexus or glomus type lesions (less common).
Type III — Variable rapid flow lesions with multiple feeding arteries, often seen in young patients.

Spinal AVMs may also be assessed by flow characteristics. High flow lesions are visualized in less than 5 seconds, and low flow lesions require much longer times for clearance of contrast.

Magnetic resonance imaging is proving to be a superb initial method of evaluating patients with myelopathic symptoms. This technique has several advantages over conventional x-ray scanning, including the absence of ionizing radiation, the ability to achieve multiplanar imaging, the absence of bone artifact, and improved soft tissue contrast. Several case reports have documented the diagnosis of spinal AVMs by MR imaging.[5-7] The AVMs were best visualized with T2 weighted images and appeared as serpiginous areas of low signal intensity.

These areas had a longitudinal orientation on the sagittal images and were oriented radially to the cord on the axial images. On the T1 weighted axial images, these defects showed decreased signal intensity, while the corresponding T2 axial images showed increased signal intensity.[7]

We have scanned four patients with spinal AVMs who had normal MRI studies (Figs 1A, 1B, 2A, 2B). Myelograms revealed the AVM in all of these patients (Figs 1C, 2C, 2D). There may be several reasons for the failure to visualize the AVMs using MRI. Two patients underwent MRI scanning when only body coil images were available; the resolution of body coil images is inferior to that of spine coil images. However, it would be difficult to delineate small lesions, even in spine coil images. Three patients did not have transaxial imaging performed.

Many technical factors may degrade MR images, causing reduced sensitivity for detecting AVMs. For example, a small amount of patient motion degrades fine image detail. Also, rapid flow in the AVM may appear as a signal void on MR images. On T1 weighted scans, there is a lack of signal from CSF, which would make depicting an extradural AVM from CSF very difficult. Surgical clips and CSF pulsations would also degrade the image quality.

Gradient-echo techniques are new MRI methods that appear to be good for assessing flowing blood, and may improve the ability of MR to detect AVMs. Gadolinium-DTPA, a paramagnetic contrast agent, may in the future help detect lesions, including AVMs, that are not apparent on the unenhanced study.

In a patient with normal findings on MRI scan who continues to have neurological symptoms, myelography should be performed. Myelography has been a good method for the diagnosis of spinal AVMs. In one large series, 86% of the patients showed characteristic serpiginous filling defects and gave positive results in 97% of cases of spinal AVMs.[11] Myelography also localized the lesions for angiographic evaluation (Figs 1D, 1E).

Conclusion

We report four patients with normal findings on MRI in whom myelography demonstrated a spinal AVM. In the future, new imaging techniques, better coils and better contrast agents may help further refine the role of MRI in the diagnosis of AVM. Until these techniques are fully evaluated, however, we recommend myelography for patients with normal MR studies who have continuing neurological symptoms.

References

1. Aminoff MJ, Logue V: Clinical features of spinal vascular malformations. *Brain* 1974;97:197.
2. Djindjian M: Clinical symptomatology and natural history of arteriovenous malformations of the spinal cord: A study of clinical aspects and prognosis, based on 150 cases, in Pia HW, Djindjian R (eds): *Spinal Angiomas: Advances in Diagnosis and Therapy*. New York, Springer-Verlag, 1978, p 75.
3. Pia HW: Symptomatology of spinal angiomas, in Pia HW, Djindjian R (eds): *Spinal Angiomas: Advances in Diagnosis and Therapy*. New York, Springer-Verlag, 1978. p 75.
4. Jellinger K: Pathology of spinal vascular malformations and vascular tumors, in Pia HW, Djindjian R (eds): *Spinal Angiomas: Advances in Diagnosis and Therapy*. New York, Springer-Verlag, 1978, p 18.
5. DiChiro G, Doppman JL, Dwyer AJ, et al: Tumors and AVMs of the spinal cord: Assessment using MR. *Rad* 1985;156:689-697.
6. Kulkarni MV, Burks D, Price A, et al: Diagnosis of spinal arteriovenous malformation in a pregnant patient by MR imaging. *JCAT* 1985;V1:171-173.
7. Masaryk TJ, Ross JS, Modic MT, et al: Radiculomeningeal vascular malformation of the spine: MR imaging. *Rad* 1987;164:845-849.
8. Pia HW, Vogelsang H: Diagnos und therapiespinaler angioma. *Dtsch Z Nervenheilkd* 1965;187:74-96.
9. Krayenbuhl H, Yasargil MG: Die varicosis spinalis und ihre behandlung. *Schweiz Arch Neurol Neurochir Psychiatr* 1963;92:74-92.
10. DiChiro G, Doppman JL, Ommaya AK: Radiology of spinal cord arteriovenous malformations. *Progr Neurol Surg* 1971;4:39.
11. Ommaya AK: Spinal arteriovenous malformations, in Wilkins RH, Rengachary SS (eds): *Neurosurgery*. New York, McGraw-Hill, 1984, p 495.
12. Doppman JL, DiChiro G, Ommaya AK: *Selective Angiography of the Spinal Cord*. St Louis, Warren H Green Inc, 1969.

The Authors

DIPAK C. SHAH, M.D.
RANDALL JAMES, M.D.
AKHTAR ASHRAF, M.D.
ANGELA M. NOTO, M.D.
SARA Y. SHULL, M.D.

The authors are from the Department of Radiology, Truman Medical Center, University of Missouri-Kansas City School of Medicine.

Reprints

Dipak C. Shah, M.D.
Department of Radiology
Truman Medical Center
2301 Holmes
Kansas City, Missouri 64108

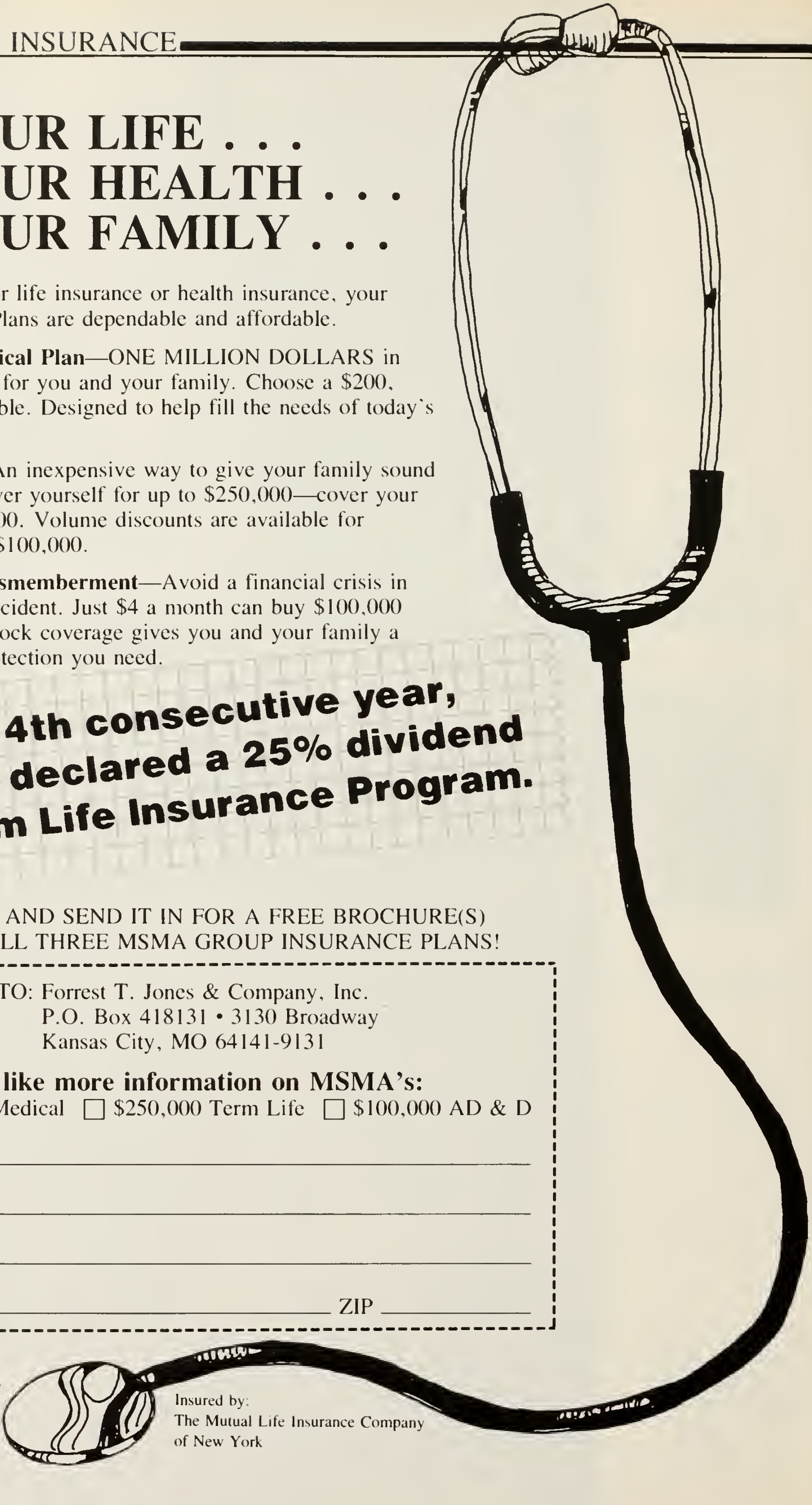
"I toss dozens of journals.
This one I keep."
SENIOR PATIENT

"Senior Patient is a very readable journal that helps me deal with my frustrations in treating older patients. It's a real pearl. Why don't you read the next issue?"

SENIOR PATIENT

Senior Patient
4530 West 77th St.
Minneapolis, MN 55435
(612) 835-3222

McGraw-Hill



FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $200, $500, or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S) ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:

☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ______________________________

ADDRESS ______________________________

CITY ______________________________

STATE ______________________ ZIP __________

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

Insured by:
The Mutual Life Insurance Company
of New York

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

September

7 - 9 **Medical Legal Environment: The Involvement of the Medical Director** — Location: St. Louis University School of Medicine. Contact: CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

11 - 13 **Treatment of Destructive Behaviors in Persons with Developmental Disabilities** — Location: Masur Auditorium, Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, MD. Contact: Barbara McChesney, Prospect Associates, Suite 500, 1801 Rockville Pike, Rockville, MD 20852. 301/468-6555.

13 - 14 **Eighth Annual Symposium on Geriatrics and Gerontology** — Location: Clarion Hotel, St. Louis, MO. Contact: Diane Coibion, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/894-6510.

13 - 14 **Care of the Aged: Applications of Health Services Research** — Location: Clarion Hotel, St. Louis, MO. Contact: Conference Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

14 - 16 **Pediatric Advanced Cardiac and Trauma Support for Life and Pediatric Advanced Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Elaine Thompson, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

15 **Computing in the Health Sciences** — Location: School of Medicine, University of Missouri, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, MU School of Medicine, Columbia MO. 65212. 341/882-4105.

16 **Selected Aspects of Primary Medical Care** — Location: Grand River Inn, Chillicothe, MO. Contact: Turner L. Minnigerode, M.D., The Ed Bixby Institute for Postgraduate Medical Education, Research Medical Center, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

20 **Female Incontinence: Cost Containment in Treatment and Diagnosis** — Location: Breckenridge Inn Frontenac, St. Louis, MO. Contact: Irene Kalnins, St. Louis University School of Medicine, CME Office, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

20 **Southern Illinois Perinatal Program: Future Directions of Perinatology** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Judie Caleca, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5317.

21 **Oncology Update: Malignant Melanoma** — Location: St. Luke's Hospital Institute for Health Education, Emerson Auditorium, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/851-6006.

22 - 23 **1st Annual Update Course in Ophthalmology** — Location: Washington University School of Medicine, St. Louis, MO. Contact: Kathy Ryan, Box 8096, 660 S. Euclid Ave., St. Louis, MO 63110. 314/362-5722.

22 - 23 **Dermatology** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

23 - 24 **Cornea and Contact Lens Update** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Janice Taylor, SLU Ophthalmology, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/772-8261.

25 **Eighteenth Annual Wendell G. Scott Lecture: Pulmonary Embolism and Technology Assessment — Lessons from a Multicenter Trial.** Speaker: Dr. James H. Thrall, Harvard Medical School. Contact: Ronald G. Evans, M.D., Director, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7100.

27 **Lowering Lipids** — Location: Hyatt Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402, S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

Roller-coaster investing won't just take you to dizzying heights.

Roller-coasters are for kids.

Fast climbs and sudden drops are fine for kids on a roller-coaster. But they can be devastating to businesses, organizations and individuals whose investment plans don't provide for risk.

The secret to good choices for prudent investors is finding investments that show good returns over the long haul. Those safe, strong investments do exist. To find them, you need the right information.

United Missouri is *The Information Bank*. Any questions?

Investment Counsel Service
UNITED MISSOURI BANK
Member FDIC
P.O. Box 419226 Kansas City, Missouri 64141-6226 Stuart Murdock (816) 556-7340

29 - 30 **Advanced Trauma Life Support Provider Course** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Mary Keegan, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8365.

October

5 - 7 **Biomedical Image Processing with Microcomputers** — Location: Marriott's Pavilion Hotel, St. Louis, MO. Contact: Loretta Giacoletto, CME Office, Washington University School of Medicine, Box 8063, S. Euclid, St. Louis, MO 63110. 314/362-6891.

6 **Transplantation** — Location: Research Medical Center, Kansas City, MO. Contact: Turner L. Minnigerode, M.D., Research Medical Center, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

6 - 7 **Rheumatology** — Location: Missouri University School of Medicine, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MU School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

6 - 8 **Ozark Chest Conference: Lung & Heart/Lung Transplantation** — Location: Tan-Tar-A, Lake Ozark, MO. Contact: American Lung Association of Eastern Missouri, 1118 Hampton Avenue, St. Louis, MO 63139-3196, 314/645-5505. Or American Lung Association of Western Missouri, 2007 Broadway, Kansas City, MO 64108. 816/842-5242.

9 - 10 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

12 - 14 **Issues in Black Health Care** — Location: Adams Mark Hotel, Kansas City, MO. Contact: Barry Kling, Missouri University School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

13 **ICU Nosocomial Infections: We CAN Make a Difference** — Location: Research Medical Center, Kansas City, MO. Contact: Turner L. Minnigerode, M.D., Research Medical Center, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

13 - 14 **Alumni Weekend** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

18 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

18 - 19 **NIH Grants Seminar** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20 - 21 **Third Annual Symposium and Workshop on Operative Laparoscopy, Pelviscopic Surgery and Laser Endoscopy — "Advances, Complications and Controversies"** — Location: St. Luke's Hospital, Chesterfield, MO. Contact: Patty Fogerty, Program Coordinator, Department of Education, St. Luke's Hospital Institute for Health Education, 222 South Woods Mill Road, Suite 350 North, St. Louis, MO 63017. 314/851-6006.

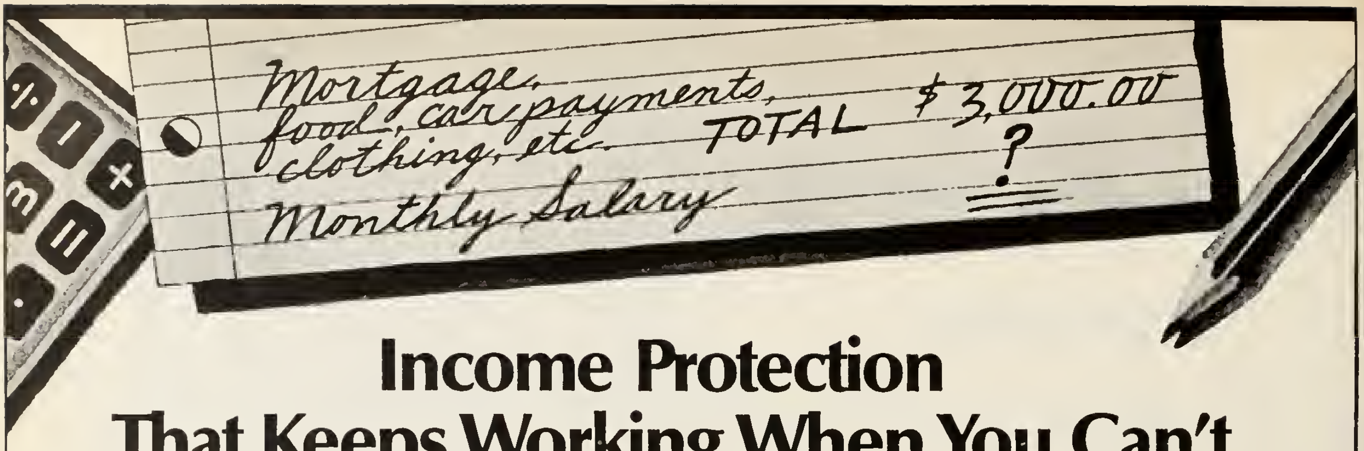
20 - 21 **Pulmonary Medicine** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20 - 21 **1989 Cancer Symposium** — Location: Sheraton West Port Inn, St. Louis, MO. Contact: Jayma Mikes, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8854.

20 - 21 **Cancer Conference IV** — Location: Big Cedar Lodge, Table Rock Lake, MO. Contact: Jackie Hartman or Sarah Johansson, Greene County Medical Society, 1200 E. Woodhurst, D-200, Springfield, MO 65804. 417/887-1017.

23 **City-Wide Radiology Conference: Renal and Adrenal MRI** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

25 - 29 **Ethical Choices in the Age of Pervasive Technology — A World Conference** Location: University of Guelph, Ontario, Canada. Contact: Brian Segal, President, Division of Continuing Education, Room 160, Johnston Hall, University of Guelph, Guelph, Ontario, Canada N1G 2W1. 519/824-4120, ext. 3956 or 519/824-4747, ext. 3957. FAX 519/767-0758.


Mortgage, food, car payments, clothing, etc. TOTAL $3,000.00
Monthly Salary ?

Income Protection
That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance
programs offer you coverage and
cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: James
FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______________________

Address ______________________

City ____________ State ____________ ZIP ____________

Phone: ( ) ____________ Best time to call: ____________

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

November

2 - 3 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

2 - 4 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis MO. Contact: Elaine Thompson St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

2 - 4 **Kansas City Southwest Clinical Society - Annual Fall Clinical Conference** — Location: Park Place Hotel, Kansas City, MO. Contact: Linda F. Smutz, Executive Director, 7920 Ward Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

3 **Eighth Dr. Richard A. and Betty H. Sutter Visiting Professorship in Occupational and Industrial Medicine: "Imaging Occupational Trauma: Acute and Chronic"** — Location: Scarpellino Auditorium, Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: Julie A. Jackovich, Mallinckrodt Institute of Radiology, Washington University Medical Center, 510 South Kingshighway, St. Louis, MO 63110. 314/362-2866.

3 - 4 **OB/GYN** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

3 - 5 **Microsurgery of the Lumbar and Cervical Spine** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

6 - 11 **Microsurgery of the Cranial Base** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

10 - 11 **Nd:YAG Operative Hysteroscopy/Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

10 - 12 **Sixteenth Annual Symposium: Anesthesia and The Geriatric Patient** — Location: The Marriott Pavilion Hotel, One Broadway, St. Louis, MO. Contact: Geriatric Symposium, Dept. of Anesthesiology, Box 8054, Washington University School of Medicine, 660 S. Euclid, St. Louis, MO 63310. 314/362-6973.

11 - 12 **Infectious Disease** — Location: Tan-Tar-A, Osage Beach, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

15 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

December

1 - 2 **17th Annual Diabetes Symposium: Current Topics in Diabetes for the Practicing Physician** — Location: Hyatt Regency, St. Louis Union Station. Contact: Jeanne Rogers, Kilo Diabetes & Vascular Disease Research Foundation, 1227 Fern Ridge Parkway, #100, St. Louis, MO 63141. 314/434-6500.

1 - 3 **Cardiovascular Medicine Legal Environment: Medicine's Response** — Location: San Diego Marriott and Marina, San Diego, CA. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

2 **Modulating the Immune Response to Benefit the Patient** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 9 **The Head Injury Patient: Advances in the '80's** — Location: Hyatt Regency at Union Station, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

YOCON®

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

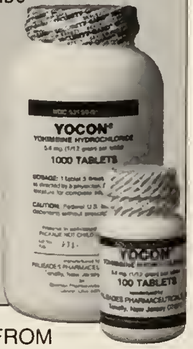
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES
PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

Why does JACKSON & COKER *recruit more physicians each year than any other company?*

- ☐ Largest pool of available physicians in the nation
- ☐ Network of 7 regional offices nationwide
- ☐ Expertise that produces unparalleled results in recruiting quality physicians
- ☐ Proven system that produced over 1,000 placements in the last 3 years.

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

JACKSON
AND COKER

Physician's Recognition Awards

Sixty-three MSMA members qualified for the MSMA-AMA Physician's Recognition Award during May and June 1989. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Audrain

Z. A. Ajans, *Mexico*

Boone

Ralph Braunschweig, *Columbia*
James S. Denninghoff, *Columbia*
Terry S. Hoyt, *Columbia*
John J. Oro, *Columbia*
Herbert A. Ferrari, *Columbia*

Buchanan

Carlos E. Moya, *St. Joseph*
Sheila Shah, *St. Joseph*

Butler-Wayne-Ripley-Carter

John P. Christy, *Poplar Bluff*

Clay-Platte

Robert L. Breckenridge, *Kansas City*

Franklin-Gasconade-Warren

Philip D. Dean, *Washington*
Robert Steinberger, *Washington*

Grand River

William T. Boulware, *Chillicothe*

Greene

Charles E. Lockhart, *Springfield*
Jasper N. Wakeman, *Springfield*

Henry

Richard H. King, *Clinton*

Jasper

Marvin A. Singleton, *Joplin*

Metro. Med.-Greater Kansas City

Ifthekhar Ahmed, *Kansas City*
John V. Anderson, *Kansas City*
Alan E. Bauman, *Kansas City*
Marvin D. Bordy, *Kansas City*
William F. Case, *Kansas City*
Edwin G. Farrell, *Kansas City*
Brent W. Ginsberg, *Kansas City*
Joseph R. Guastello, *Kansas City*
Stanley Hellerstein, *Kansas City*
Howard W. Kilbride, *Kansas City*
Lynn H. Kindred, *Kansas City*
Michael L. Loren, *Independence*
Turner L. Minnigerode, *Kansas City*
Ernest H. Neighbor, *Kansas City*
Larry W. Piebenga, *Kansas City*
Charles B. Porter, *Kansas City*
Donald A. Potts, *Kansas City*
Donald D. Simmons, *Kansas City*
Wilber B. Spalding, *Kansas City*
Joe E. Spurney, *Kansas City*
Daniel A. Waxman, *Kansas City*
Kathleen M. Williams, *Kansas City*
Jerry B. Wurster, *Kansas City*

Mid-Missouri

Leonard J. Dumonceaux, *Rolla*

Mineral Area

Stanton L. Hardy, *Desloge*

Northwest

James K. Hunter, *Fairfax*

Perry - Ste. Genevieve

Lawrence W. Feltz, *Perryville*

Pike

Lawrence G. Stuerman, *Louisiana*

St. Charles-Lincoln

William H. Poggemeier, *St. Charles*

St. Louis Metropolitan

Daniel A. Abodeely, *Chesterfield*
Victor H. Albera, *St. Clair*
Jorge M. Alegre, *Chesterfield*
Jerome M. Aronberg, *Clayton*
Stephen F. Bowen, *St. Louis*
Enrique Cubillo, *Chesterfield*
Tony M. Deeths, *St. Louis*
Wilfrido C. Feliciano, *St. Louis*
William H. Friedman, *St. Louis*
Nathan Kimelman, *St. Louis*
Norton S. Kronemer, *St. Louis*
Richard A. Landy, *St. Louis*
Daniel H. Lischwe, *Bridgeton*
Allan H. McCown, *St. Louis*
Barry A. Siegel, *St. Louis*
Bryan R. Troop, *St. Louis*

West Central

Warren C. Lovinger, *Nevada*

What do income tax deductions, financial security and medical student loans have in common?

The Invest in Missouri Program

Established in 1960, the Missouri State Medical Foundation (MSMF) provides low interest loans to Missouri students attending AMA-approved medical schools throughout the United States. The Foundation has provided more than 2,600 medical students with over $2.5 million in educational loans to date. Most of these funds have been provided through contributions of practicing medical professionals like yourself.

Now MSMF has created the **Invest in Missouri Program**. Your $5,000 or more investment not only provides funds for medical students but also gives you an *immediate* partial tax deduction **and** *extra* income at retirement.

The **Invest in Missouri Program** will help your future and that of colleagues in training. Please call or write today for more information.

The Invest in Missouri Program
Michael G. Grimes, MSMF Financial Advisor
Vice President, Prudential-Bache Securities
231 S. Bemiston Ave.
St. Louis, Missouri 63105
1/800-877-9200 • in St. Louis 721-9200

Complete the coupon and mail to: Michael G. Grimes, Vice President, Prudential-Bache Securities, 231 S. Bemiston, St. Louis, MO 63105

☐ Yes, I want to know more about the MSMF **Invest in Missouri** program. Please send me a no-obligation proposal. (*please print the information requested*)

Name ____________________

Address ____________________

City ____________ State ____________ Zip ____________

Date of birth ____________ Date of retirement ____________

Investment amount ____________

New Members

■ **Mark I. Aeder, M.D.**, 6400 Prospect, Suite 328, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Aeder received his preliminary education at Bucknell University and obtained his medical degree at Washington University School of Medicine in 1980. He completed his residency at Case Western Reserve University Hospital, Cleveland, Ohio. Dr. Aeder specializes in transplant surgery.

■ **Maria I. Al-Basha, M.D.**, University Hospital and Clinics, Dermatology Department, 1 Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Al-Basha received her preliminary education at William Woods College and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1985. She is completing her residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Al-Basha specializes in dermatology.

■ **Richard C. Arnspiger II, M.D.**, 4320 Wornall Road, Suite 216, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Arnspiger received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1982. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Arnspiger specializes in general and vascular surgery.

■ **Eileen A. Bashford, M.D.**, 2700 Rockcreek Parkway, Suite 306, North Kansas City 64117, has become a member of the Clay-Platte County Medical Society. Dr. Bashford received her preliminary education at the University of Kansas and obtained her medical degree at the University of Kansas School of Medicine in 1984. She completed her residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Bashford specializes in anesthesiology.

■ **John M. Bedwinek, M.D.**, 615 S. New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Bedwinek obtained his medical degree at Columbia University College of Physicians and Surgeons in 1971. He completed his residency at Dartmouth-Hitchcock Medical Center, Hanover, NH. Dr. Bedwinek specializes in radiation oncology.

■ **Walter L. Bender, M.D.**, Kidney Associates of Kansas City, 6700 Troost, Suite 10, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bender received his preliminary education at Johns Hopkins University and obtained his medical degree at Johns Hopkins University School of Medicine in 1979. He completed his residency at Johns Hopkins University, Baltimore, MD. Dr. Bender specializes in internal medicine.

■ **William L. Berger, M.D.**, 808 N. Noyes Blvd., St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Berger received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1980. He completed his residency at the University of Illinois, Chicago, IL. Dr. Berger specializes in gastroenterology and internal medicine.

■ **Jeffrey N. Bloom, M.D.**, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., Rm. 534, Glennon Hall, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Bloom obtained his medical degree at the New York University School of Medicine in 1972. He completed his residency at the University of Florida Medical Center, Gainesville, Fl. Dr. Bloom specializes in ophthalmology.

■ **Craig W. Boyd, M.D.**, 1245 Graham Road, Suite 408, Florissant 63031, has become a member of the St. Louis Metropolitan Medical Society. Dr. Boyd obtained his medical degree at the University of Illinois-Urbana-Champaign in 1983. He completed his residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Boyd specializes in obstetrics/gynecology.

■ **Bradley E. Buchanan, M.D.**, 3660 S. National, Suite 350, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Buchanan received his preliminary education at Drury College and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1982. He completed his residency at St. Louis University, St. Louis, MO. Dr. Buchanan specializes in anesthesiology.

■ **Alfred C. Caruso, M.D.**, 1010 Carondelet Drive, Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Caruso received his preliminary education at Rockhurst College and obtained his medical degree at the Universidad Autonoma De Guadalajara in 1983. He completed his residency at Mount Sinai Hospital, Chicago, IL. Dr. Caruso specializes in internal medicine.

■ **Robert J. Churchill, M.D.**, University of Missouri Hospital and Clinics, Department of Radiology, 1 Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Churchill received his preliminary education at Loras College and obtained his medical degree at Loyola University Stritch School of Medicine in 1972. He completed his residency at Loyola University Foster G. McGaw Hospital, Chicago, IL. Dr. Churchill specializes in diagnostic radiology.

■ **Reginald W. Dusing, M.D.**, St. Luke's Hospital, Department of Radiology, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Dusing received his preliminary education at Southern Methodist University and obtained his medical degree at Baylor College of Medicine in 1975. He completed his residency at St.

Luke's Hospital, Kansas City, MO. Dr. Dusing specializes in diagnostic radiology.

■ **Laura S. Fitzmaurice, M.D.**, 24th and Gillham Road, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Fitzmaurice received her preliminary education at Creighton University and obtained her medical degree at Creighton University School of Medicine in 1983. She completed her residency at Children's Mercy Hospital, Kansas City, MO. Dr. Fitzmaurice specializes in pediatric emergency medicine.

■ **Ellen S. Glotzbach, M.D.**, 601 East 63rd St., Suite 406, Kansas City 64110, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Glotzbach received her preliminary education and obtained her medical degree at the University of Missouri-Kansas City in 1983. She completed her residency at Dartmouth-Hitchcock Medical Center, Hanover, NH. Dr. Glotzbach specializes in pediatrics.

■ **Joe A. Graves, M.D.**, Health Science Center, Department of Otolaryngology, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Graves received his preliminary education at the University of Texas-Dallas and obtained his medical degree at the University of Texas-San Antonio School of Medicine in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Graves specializes in otolaryngology.

■ **Patricia Hogan, D.O.**, Western Missouri Mental Health Center, 600 E. 22nd St., Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hogan received her preliminary education at the University of Missouri-Kansas City and obtained her osteopathic degree at the University of Health Sciences in 1982. She is completing her residency at the Western Missouri Mental Health Center, Kansas City, MO. Dr. Hogan specializes in psychiatry.

■ **Aaron M. Josephson, M.D.**, 1211 S. Glenstone, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Josephson received his preliminary education at the University of Nebraska and obtained his medical degree at the University of Oklahoma School of Medicine in 1949. He completed his residency at the Michael Reese Hospital and Medical Center, Chicago, IL. Dr. Josephson specializes in internal medicine.

■ **William J. Keenan, M.D.**, 1465 S. Grand, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Keenan obtained his medical degree at the Loyola University Stritch School of Medicine in 1964. He completed his residency at Boston City Hospital, Boston, MA. Dr. Keenan specializes in pediatrics.

■ **Jane F. Knapp, M.D.**, 24th at Gillham Road, Children's Mercy Hospital, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Knapp received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at the University of Missouri-Columbia in 1978. She completed her residency at Children's Mercy Hospital, Kansas City, MO. Dr. Knapp specializes in pediatrics.

■ **Paul E. Krug, M.D.**, 3030 Baltimore, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Krug received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas Medical School in 1979. He completed his residency at Beth Israel Hospital, Boston, MA. Dr. Krug specializes in anesthesiology.

■ **Jerome P. Lamb, M.D.**, 100 N.W. Mock, Suite 202, Blue Springs 64015, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Lamb received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at St. Louis University School of Medicine in 1981. He completed his residency at Tulane University, New Orleans, LA. Dr. Lamb specializes in plastic and reconstructive surgery.

■ **Rodrigo A. Mariano, M.D.**, St. Louis University Medical Center, Department of Pathology, 3635 Vista at Grand Blvd., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Mariano obtained his medical degree at the University of Santo Tomas, Manila, Philippines in 1981. He is completing his residency at St. Louis University Hospital, St. Louis, MO. Dr. Mariano specializes in pathology.

■ **Darnell L. Martin, M.D.**, University of Missouri Hospital and Clinics, Division of Dermatology, M173, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Martin received her preliminary education at the University of Northern Colorado and obtained her medical degree at the George Washington University School of Medicine in 1987. She is completing her residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Martin specializes in dermatology.

■ **Francis P. McCormick, M.D.**, Consortium for Health Education, 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. McCormick received his preliminary education at Creighton University and obtained his medical degree at the University of Nebraska College of Medicine in 1986. He is completing his residency at the University of Missouri-Kansas City Affiliated Hospitals, Kansas City, MO. Dr. McCormick specializes in internal medicine.

■ **Charles H. Morgan, M.D.**, 3231 S. National, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Morgan received his preliminary education at the University of South Dakota and obtained his medical degree at the University of South Dakota School of Medicine in 1978. He completed his residency at Michigan State University, East Lansing, MI. Dr. Morgan specializes in internal medicine.

■ **Jhulan Mukharji, M.D.**, 2900 Baltimore, Suite 340, Kansas city 64108, has become a member of the Metropolitan Medical Society of Greater Kansas

City. Dr. Mukharji received his preliminary education at Hans Raj College, India and obtained his medical degree at the University College of Medical Sciences, New Delhi, India in 1976. He completed his residency at Jersey City Medical Center, Jersey City, NJ. Dr. Mukharji specializes in cardiovascular disease.

■ **Ernest H. Neighbor, M.D.,** 500 Penn Park Medical Center, 2929 Baltimore, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Neighbor received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas Medical School in 1966. He completed his residency at Kansas University Medical Center, Kansas City, KS. Dr. Neighbor specializes in orthopedic surgery.

■ **George C. Olive, Jr., M.D.,** 1900 S. National, Suite 2900, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Olive received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at Johns Hopkins University School of Medicine in 1982. He completed his residency at the University of California, San Francisco, CA. Dr. Olive specializes in general surgery.

■ **Richard B. Price, M.D.,** 1000 E. 50th St., #230, Kansas City 64110, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Price received his preliminary education at the University of Texas and obtained his medical degree at the University of Oklahoma in 1982. He completed his residency at the University of Kansas, Kansas City, KS. Dr. Price specializes in otolaryngology.

■ **James R. Probst, M.D.,** 10345 Watson Road, St. Louis 63127, has become a member of the St. Louis Metropolitan Medical Society. Dr. Probst received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1985. He completed his residency at the Jacksonville Health Education Program, Jacksonville, Fl. Dr. Probst specializes in obstetrics/gynecology.

■ **Raymond L. Rodriguez, M.D.,** St. Louis University Hospital, 1325 S. Grand, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Rodriguez obtained his medical degree at the University of Illinois-Chicago in 1981. He completed his residency at Western Reserve Care Systems, Inc., Youngstown, OH. Dr. Rodriguez specializes in anesthesiology.

■ **Kevin B. Schaberg, M.D.,** 224 S. Woods Mill Rd., Suite 720, Chesterfield 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Schaberg obtained his medical degree at the Washington University School of Medicine in 1966. He completed his residency at Johns Hopkins University, Baltimore, MD. Dr. Schaberg specializes in obstetrics/gynecology.

■ **John W. Shook, M.D.,** Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Shook received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1984. Dr. Shook is completing his residency at Truman Medical Center, Kansas City, MO. Dr. Shook specializes in general surgery.

■ **Anne A. Smid, M.D.,** 1443 N. Robberson, Suite 208, Springfield 65802, has become a member of the Greene County Medical Society. Dr. Smid received her preliminary education and obtained her medical degree at the University of Missouri-Kansas City in 1982. She completed her residency at the University of Michigan, Ann Arbor, MI. Dr. Smid specializes in diagnostic radiology.

■ **Timothy W. Smith, M.D.,** 1010 Carondelet Dr., Suite 421, Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Smith received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas Medical Center in 1974. He completed his residency at Washington University, St. Louis, MO. Dr. Smith specializes in pulmonary medicine.

■ **Samuel P. Solish, M.D.,** 660 South Euclid, Glaucoma Section, Department of Ophthalmology, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Solish obtained his medical degree at Tufts University in 1985. He completed his residency at Northeast Medical Center, Boston, MA. Dr. Solish specializes in ophthalmology.

■ **C. Tinsley Stewart, M.D.,** SSM Rehabilitation Institute, 6th Floor, 6420 Clayton Rd., St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Stewart obtained his medical degree at the University of Louisville in 1981. He completed his residency at the University of Minnesota, Minneapolis, MN. Dr. Stewart specializes in physical medicine and rehabilitation.

■ **Murali Sundaram, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Sundaram obtained his medical degree at Guntar Medical College, Nagarjuna University, India in 1968. He completed his residency at University Hospital, St. Louis, MO. Dr. Sundaram specializes in radiology.

■ **Charles J. Sutherland, M.D.,** 4949 Barnes Hospital Plaza, Suite 11300, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Sutherland obtained his medical degree at the Yale University School of Medicine in 1971. He completed his residency at the University of Virginia, Charlottesville, VA. Dr. Sutherland specializes in orthopedic surgery.

■ **Russell E. Tackett, M.D.,** 6700 Troost, Suite 300, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Tackett received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1980. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Tackett specializes in urology.

■ **James E. Walentynowicz, M.D.,** 1034 S. Brentwood Blvd., Suite 650, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Walentynowicz obtained his medical degree at the St. Louis University School of Medicine in 1981. He completed his residency at the Naval Hospital, Portsmouth, VA. Dr. Walentynowicz specializes in orthopedic surgery.

■ **Tom F. Watson, M.D.**, 1900 S. National, Suite 1800, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Watson received his preliminary education at the University of Nebraska and obtained his medical degree at the University of Nebraska College of Medicine in 1984. He completed his residency at the University of Arkansas for Health Sciences, Little Rock, Arkansas. Dr. Watson specializes in anesthesiology.

■ **Steve W. Waxman, M.D.**, 39th and Rainbow, Kansas City, KS 66103, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Waxman received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1986. He is completing his residency at the Kansas University Medical Center, Kansas City, KS. Dr. Waxman specializes in urology.

■ **Wendall N. Williams, M.D.**, 3409 North Union Blvd., St. Louis 63115, has become a member of the St. Louis Metropolitan Medical Society. Dr. Williams obtained his medical degree at the Baylor College of Medicine in 1982. He completed his residency at Washington Hospital Center, St. Louis, MO. Dr. Williams specializes in internal medicine.

■ **Paul E. Zachary, Jr., M.D.**, Consortium for Health Education, 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Zachary received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1988. He is completing his residency at the UMKC School of Medicine Affiliated Hospitals, Kansas City, MO. Dr. Zachary specializes in internal medicine.

■ STUDENT MEMBERS

University of Missouri-Kansas City

John P. Waldo

■ RESIDENT SECTIONS

Metro Med-Kansas City Resident Section

Kari Beesley, M.D. — *Pediatrics*
Lisa A. Carney, M.D. — *Pediatrics*
Mark S. Clark, M.D. — *Internal Medicine/Pediatrics*
W. Scott Colliton, M.D. — *Pediatrics*
Sara J. Dorsett, M.D. — *Family Practice*
Diana L. Hong, M.D. — *Pediatrics*
Scott W. McCulloch, M.D. — *Internal Medicine*
Timothy W. Olsen, M.D. — *Internal Medicine/Opthalmology*
Kevin F. Ring, M.D. — *Internal Medicine*
John M. Snider, M.D. — *General Surgery*
Thomas B. Valuck, M.D. — *Pediatrics*
Sandra L. Visner, M.D. — *General Surgery*
Jon A. Welsh, M.D. — *Family Practice*

Greene County Resident Section

Mary Jo Fisher, M.D. — *Family Practice*

Boone County Resident Section

Wendell D. Bronson, M.D. — *Internal Medicine*
Terry J. Elwing, M.D. — *Radiology*
Ellis B. Froeschli, M.D. — *Family Practice*
Carl Gold, M.D. — *Preliminary Surgery*
David J. Koenig, M.D. — *Internal Medicine*
Marcus B. Nashelsky, M.D. — *Pathology*
William E. Roland, M.D. — *Medicine*
Larry Slaughter, M.D. — *Family Practice*

St. Louis Metro Resident Section

Joseph W. Basler, M.D. — *Urology*
Gary A. Bellus, M.D. — *Pediatrics*
Ann A. Biest, M.D. — *Internal Medicine*
Patrick Clyne, M.D. — *Pediatrics*
Stephen E. D'Orazio, M.D. — *General Surgery*
Erik J. Dovre — *Obstetrics/Gynecology*
Robert M. Esterl, Jr., M.D. — *General Surgery*
Mark E. Freeman, M.D. — *Psychiatry*
Jacalyn E. Hazen, M.D. — *Pediatrics*
John C. Kefalas, M.D. — *Orthopedic Surgery*
J. Gordon Leiferman, M.D. — *Pediatrics*
Craig H. Lundgren, M.D. — *Internal Medicine*
Michael Mardiney, III, M.D. — *Internal Medicine*
Martha J. Margreiter, M.D. — *Pediatrics*
Howard Morrison, M.D. — *Internal Medicine*
Jeana D. O'Brien, M.D. — *Internal Medicine*
David W. Prewitt, M.D. — *Internal Medicine*
Maryann E. Prewitt, M.D. — *Obstetrics/Gynecology*
Carolyn J. Pryor-Brown, M.D. — *Obstetrics/Gynecology*
Nancy T. Rodgers, M.D. — *Internal Medicine*
Thomas W. Rossiter, M.D. — *Transitional*
Paul A. Ruggieri, M.D. — *General Surgery*
Jose M. Ruiz, M.D. — *Internal Medicine*
Gregory R. Saboeiro, M.D. — *Radiology*
Mark Scheperle, M.D. — *Internal Medicine*
Morris H. Seligman, M.D. — *Internal Medicine*
Carla J. Siegfried, M.D. — *Internal Medicine*
Ronald M. Smith, M.D. — *Orthopedic Surgery*
Steven P. Sparagana, M.D. — *Pediatrics*
Robert J. Stuppy, M.D. — *Cardiovascular Diseases*
Farris K. Timimi, M.D. — *Medicine*
Jeffrey D. Trachtenberg, M.D. — *General Surgery*
Catherine M. Wittgen, M.D. — *General Surgery*

In Memoriam

■ **Hobart K.B. Allebach, M.D.,** died June 20, 1989 at the age of 86. Dr. Allebach, a pathologist, practiced medicine in the Kansas City area for more than 40 years. He was chief pathologist at the Milwaukee Hospital from 1935 to 1942. He became chief pathologist and director of laboratories at Research Medical Center in 1942. He started and headed the School of Medical Technologists, as well as the pathology resident program at Research. He obtained his medical degree at the Kansas University School of Medicine in 1928. Dr. Allebach was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Robert B. Best, M.D.,** died April 16, 1989 at the age of 69. Dr. Best, an emergency medicine specialist, practiced medicine at Research Medical Center for 12 years before retiring in 1985. Prior to his service at Research he practiced medicine in Higginsville for 22 years. He obtained his medical degree at Washington University School of Medicine in 1943. Dr. Best was a member of the Lafayette-Ray County Medical Society.

■ **Harvey R. Butcher, M.D.,** died April 24, 1989 at the age of 69. Dr. Butcher, a general surgeon, practiced medicine in the St. Louis area for more than 40 years. He was a leader in the development of vascular surgery and was recognized as an authority on breast cancer. He was chief of general surgery at the Washington University School of Medicine from 1978 to 1984. He was also general surgeon-in-chief at Barnes Hospital during that time. He joined the staff of Washington University in 1944 and was appointed an emeritus professor in 1987. He obtained his medical degree at the Harvard Medical School in 1944. Dr. Butcher was a member of the St. Louis Metropolitan Medical Society.

■ **Joseph A. Conrad, M.D.,** died April 16, 1989 at the age of 78. Dr. Conrad, a general practitioner, practiced medicine in Kansas City from 1934 until he moved to Chillicothe in 1945. He practiced there until his retirement in 1986. He obtained his medical degree at the Loyola University School of Medicine in 1933. Dr. Conrad was a member of the Grand River County Medical Society.

■ **Walter C. Gray, M.D.,** died June 12, 1989 at the age of 73. Dr. Gray, a general practitioner, practiced medicine in St. Johns for nearly 30 years. He moved to Ste. Genevieve County in 1975, where he practiced until his retirement in 1987. He obtained his medical degree at St. Louis University School of Medicine in 1943. Dr. Gray was a member of the Mineral Area County Medical Society.

■ **Larry V. Hays, M.D.,** died May 21, 1989 at the age of 45. Dr. Hays, a general surgeon, was program director at St. Luke's Hospital from mid-1986 until January 1988 and was president of the Olathe Medical Center medical staff during 1984. He was a captain in the Army Reserve Medical Corps from 1971-1977. He obtained his medical degree at the University of Kansas School of Medicine in 1970. Dr. Hays was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Edward C. Holscher, Sr., M.D.,** died April 22, 1989 at the age of 81. Dr. Holscher, an orthopedic surgeon, practiced medicine for more than 43 years in several areas. He was on active duty in World War II as chief of the orthopedic section and the amputation center at Lawson General Hospital in Atlanta, Ga. He was commissioned a colonel in 1946 and was commander of the St. Louis reserve unit's 364th General Hospital. He obtained his medical degree at Harvard University Medical School in 1935. Dr. Holscher was a member of the St. Louis Metropolitan Medical Society.

■ **Carleton H. Lee, M.D.,** died April 18, 1989 at the age of 86. Dr. Lee, an anesthesiologist, practiced medicine in St. Joseph. He obtained his medical degree at the University of Kansas School of Medicine in 1939. Dr. Lee was a member of the Buchanan County Medical Society.

■ **Sherwin H. Malt, M.D.,** died June 16, 1989 at the age of 48. Dr. Malt, a general surgeon, practiced medicine in the St. Louis area. He obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1966. Dr. Malt was a member of the St. Louis Metropolitan Medical Society.

■ **Frederick W. Martin, M.D.,** died April 16, 1989 at the age of 66. Dr. Martin, an obstetrician/gynecologist, practiced medicine in Kirkwood for many years before retiring in 1987. He obtained his medical degree at the Washington University School of Medicine in 1947. Dr. Martin was a member of the St. Louis Metropolitan Medical Society.

continued on page 656

In Memoriam

continued from page 655

■ **Stanley S. Nemec, M.D.**, died April 3, 1989 at the age of 77. Dr. Nemec, a radiologist, practiced medicine in the St. Louis area. He obtained his medical degree at St. Louis University School of Medicine in 1936. Dr. Nemec was a member of the St. Louis Metropolitan Medical Society.

■ **F. Eugene Pennington, M.D.**, died April 25, 1989 at the age of 69. Dr. Pennington, a general surgeon, practiced medicine in St. Louis for nearly 30 years. In 1978, he moved to Wisconsin where he practiced until his retirement in 1982. He obtained his medical degree at the Washington University School of Medicine in 1945. Dr. Pennington was a member of the St. Louis Metropolitan Medical Society.

■ **B.C. Portuondo, M.D.**, died April 20, 1989 at the age of 82. Dr. Portuondo, a pathologist, practiced medicine in St. Louis. He was director of pathology at Alexian Brothers Hospital for more than 40 years. In 1981, he retired but continued to be affiliated with Alexian Brothers as a risk manager. He also served as director of pathology for a number of years at the old St. Anthony's Hospital in south St. Louis. He obtained his medical degree at St. Louis University School of Medicine in 1932. Dr. Portuondo was a member of the St. Louis Metropolitan Medical Society.

■ **Paul B. Vatterott, M.D.**, died July 3, 1989 at the age of 72. Dr. Vatterott, a general practitioner, practiced medicine in St. Louis for many years. He obtained his medical degree at St. Louis University School of Medicine in 1941. Dr. Vatterott was a member of the St. Louis Metropolitan Medical Society.

■ **Calvin W. Woodruff, M.D.**, died May 10, 1989 at the age of 78. Dr. Woodruff, a pediatrician, practiced medicine in Columbia for many years. He spent nine years in Nashville, TN, three years in Beirut, Lebanon and two years in Ann Arbor, MI, before coming to mid-Missouri. He was a professor of pediatrics at the University of Missouri-Columbia School of Medicine. He obtained his medical degree at Yale University School of Medicine in 1944. Dr. Woodruff was a member of the Boone County Medical Society.

■ **George H. Zografakis, M.D.**, died June 12, 1989 at the age of 58. Dr. Zografakis, a plastic surgeon, practiced medicine in St. Louis. He obtained his medical degree at the State University of New York-Syracuse in 1959. Dr. Zografakis was a member of the St. Louis Metropolitan Medical Society.

Practice Makes Perfect

In Arkansas
Practice opportunities available statewide for qualified physicians. Excellent incentives. For more information, contact Office of **Primary Care, Arkansas Department of Health, 4815 W. Markham, Little Rock, AR 72205-3867. Phone 501/661-2194.**

Omaha Mid-West Clinical Society

57th Annual
Postgraduate Assembly

November 2,3,and 4, 1989

Red Lion Inn
Omaha, Nebraska

For Information Contact:

Lorraine Seibel
Omaha Mid-West Clinical Society
7363 Pacific Street, Suite 205-B
Omaha, Nebraska 68114
(402) 397-1443

Medical School News

University of Missouri-Kansas City

■ Eighty-five medical students received Doctor of Medicine degrees at the School's graduation ceremonies this year. This brings the total number of graduates to 1036 since the School of Medicine's founding in 1971.

■ **James J. Hamilton, M.D.,** Chairman of Orthopaedic Surgery at Truman Medical Center, is the first recipient of the Rex L. Dively Chair of Orthopaedic Surgery, the University of Missouri-Kansas City's first fully endowed professorship and chair.

The chair was created by a $1.1 million gift from Mrs. Rex Dively in honor of her husband, Dr. Rex L. Dively, a chief consultant of orthopaedic surgery for the U.S. Army during World War II and a former professor at UMKC. There are only 26 such chairs of orthopaedics nationwide.

Dr. Hamilton said that the money will be used to help overcome one of the major problems associated with the replacement or bridging of broken bones. He said 10% of all artificially-joined hips fail after 10 years. A stainless-steel alloy or titanium can be used to replace broken bone, but a stronger cement is needed.

"We will now forge ahead to produce a substance that will integrate with the bone and thus prevent weakness," he said.

■ This year, for the first time, combined baccalaureate and medical degree programs such as UMKC's will be described extensively in the Medical School Admission Requirement book for the United States and Canada.

Louise Arnold, Ph.D., professor and Director of the Office of Medical Education and Research at the School, was instrumental in gathering facts from schools across the country to be included in the book which is published by the Association of American Medical Colleges (AAMC).

■ Nobel Prize winner **Dr. Joseph L. Goldstein** will be the featured speaker at the UMKC School of Medicine Weekend Lipid Conference scheduled for August 25 and 26 in Kansas City. Dr. Goldstein is Professor and Chairman of the Department of Molecular Genetics, University of Texas Health Sciences Center, Southwestern Medical School, Dallas.

Dr. Goldstein received the 1985 Nobel Prize in Medicine.

University of Missouri-Columbia

■ **Richard W. Gengelbach, M.D.,** Clinical Assistant Professor, Department of Family and Community Medicine, died in February as the result of an auto accident. Dr. Gengelbach was a highly regarded faculty member at the University of Missouri-Columbia. He practiced family medicine and taught in the department's satellite clinic in Fayette, Missouri, where he also was a leader in civic and church activities. He was a member of the Howard County and Missouri State Medical Societies.

An educational fund has been established for Dr. Gengelbach's children at the Commercial Trust Company in Fayette, Missouri. Anyone wishing to contribute to the fund may make their checks payable to: Gengelbach Children Educational Fund, Commercial Trust Company, Fayette, Missouri 65248.

■ **Jack Colwill, M.D.,** professor and chairman of family and community medicine, was one of 40 people elected to the Institute of Medicine this year. The institute was established by the National Academy of Sciences to study medical care, research and education.

"If there was one honor that was most meaningful to me, this would be it," said Colwill, who has been on the MU School of Medicine faculty since 1964 and department chairman since 1977.

Joining former U.S. **Surgeon General C. Everett Koop** as one of five new senior members was **Gwilym S. Lodwick, M.D.,** MU professor emeritus of radiology and an associate radiologist at Massachusetts General Hospital in Boston.

■ The name of the department of anatomy at the MU School of Medicine has been changed to the department of anatomy and neurobiology. The name change was made to better reflect the research and teaching interest of the faculty.

■ **Susan Allen, M.D., Ph.D.,** assistant professor of medicine, received a one-year Weldon Spring Award from the University of Missouri System. The $16,750 award will support her research, "Acid Phosphatase — A Biomarker for Osteoporosis."

■ **Martin Alpert, M.D.,** professor of cardiology, is serving as that division's interim director. Former division director **Brent Parker, M.D.,** professor emeritus, retired July 1 after serving as director since 1983. He will be working part-time through the first part of 1990 as professor emeritus.

■ **Larry Baddour, M.D.,** associate professor of infectious disease, was awarded a $22,000 MU Research Council grant for investigations in the pathogenesis of endocardial infection.

■ **Vijay Chechani, M.D.,** assistant professor of medicine, is acting chief of pulmonary, critical area and environmental medicine at Harry S. Truman Memorial Veterans Hospital. Chechani joined the division in July.

■ **William Crowley, M.D.,** professor of neurology, was appointed department chairman in July after serving as interim chairman since August 1988. He previously was in private practice in Columbia. Crowley replaces former **Chairman James Dexter, M.D.,** who left the position to devote more time to research.

■ **Gloria Deckard, Ph.D.**, assistant professor of health services management and principal investigator, and **Lanis Hicks, Ph.D.**, associate professor of health services management and co-investigator, received funding of $52,488 from the Prime Health Foundation of Kansas City and Harvard Community Plan of Boston for research on physician reaction to managed care.

■ **James Dexter, M.D.**, professor of neurology, is author of a book chapter, "The Relationship Between Sleep and the Headache Syndrome," in the **Handbook of Sleep**.

■ **Richard Finkelstein, Ph.D.**, professor and chairman of microbiology, was elected president of the Missouri branch of the American Society for Microbiology. **Charlotte Parker, Ph.D.**, professor of microbiology, was re-elected secretary/treasurer.

■ **Greg Flaker, M.D.**, associate professor of cardiology, presented "Hospital Mortality in Acute Anterior Myocardial Infarction Treated with Emergency PTCA" in June at the 31st annual International College of Angiology meeting in Rome.

■ **Robert Frank, Ph.D.**, associate chairman of physical medicine and rehabilitation, has been named interim chairman of the department and interim director of Rusk Rehabilitation Center. **Paul Kaplan, M.D.**, who held the positions previously, accepted a position in August at Ohio State University. Frank gave two presentations in August at the American Psychological Association Meeting in New Orleans.

■ **John Glenn, Ph.D.**, associate professor of health services management, presented "Epidemiological Aspects of Patient Referral: Family Physicians, Orthopaedic Surgery and Hospital Utilization" at an April meeting of the North American Primary Care Research Group in San Antonio.

■ **Bruce Graham, M.D.**, and **Paul Robert Myers, M.D.**, are new assistant professors in the department of medicine's division of cardiology. Graham, who completed his cardiology fellowship at the Loma Linda University School of Medicine, has assumed directorship of the University Hospital and Truman Veterans Hospital echocardiography laboratories. Myers completed his cardiology fellowship at the University of Iowa School of Medicine and is a recipient of an American Heart Association (Missouri Affiliate) grant, a V.A. Merit Review grant and a V.A. Research Career Development Award.

■ **James Green, M.D.**, has joined the department of obstetrics and gynecology as a clinical assistant professor. A 1974 School of Medicine graduate, he completed his residency at MU. Before returning to the University in August, he was in private practice in Joplin.

■ **Ramareddy Guntaka, Ph.D.**, professor of microbiology, was selected by the Czechoslavakian Academy of Sciences for its first General Motors Cancer Research Cancer Research Professorship. Guntaka presented seminars on "The Regulation of Gene Expression Using Retrovirus as a Model System."

■ **Robert Hoffman, D.O.**, assistant professor of medicine, and **Yoshihiko Takeda, M.D.**, rheumatology research fellow, attended the first international workshop on Molecular and Cell Biology Autoantibodies and Autoimmunity in July in Heidelberg, West Germany.

■ **Richard Holmes, M.D.**, professor of radiology, was appointed president of the Society of Nuclear Medicine at the June meeting of the society in St. Louis.

■ **Paul E. Kaplan, M.D.**, professor and chairman of physical medicine and rehabilitation and medical director of Rusk Rehabilitation Center, coauthored the book "Musculoskeletal Pain and Disability," published recently by Appleton and Lange, a division of Prentice Hall.

■ **Lucinda M. Marty, D.O.**, of the MU department of microbiology, an associate investigator at Truman Veterans Hospital, received a three-year grant totaling $132,363 from the Department of Veterans Affairs' V.A. Career Development program for her research on "Expression of Phosphatidyl Inositol-linked Proteins in Human B Cells."

■ **Wayne McDaniel, Ph.D.**, research assistant professor of surgery, received a $24,666 grant from the American Heart Association Missouri Affiliate to study "Examination of Pulsed Current Waveform for Internal Defibrillation of Dogs."

■ **Mark McIntosh, Ph.D.**, associate professor of microbiology, was selected as the 1989-90 American Society of Microbiology Foundation Lecturer. He also received a $546,000 NIH grant.

■ **Joyce Mitchell, Ph.D.**, director of the information science group, organized a panel presentation on "Biotechnology and Medical Informatics" at the American Association for Medical Systems and Informatics May National Congress in San Francisco.

■ **Weerachai Nawarawong, M.D.**, was promoted from instructor to assistant professor of surgery. He completed a thoracic surgery residency at the University in June.

■ **Karl Nolph, M.D.**, director of nephrology, was elected president-elect of the American Society for Artificial Organs. Previously, he was secretary/treasurer of the society. Nolph also is vice president of the International Society for Peritoneal Dialysis.

■ **William Noteboom, Ph.D.**, associate professor of biochemistry, presented "Topic In Vitro Growth of Normal Human Cell Types in the Absence of Serum" in May at the School of Medicine and the College of Pharmacy at Chon nam National University, Kuang du, South Korea.

■ **Francis Schmidt, Ph.D.**, associate professor of biochemistry, received a two-year $160,000 grant from the American Cancer Society for the study "Molecular Genetics of Bleomycin Biosynthesis."

■ **Shivendra Shukla, Ph.D.**, assistant professor of pharmacology, has received an NIH Research Career Development Award. The five-year stipend

THE LOWER RESPIRATORY TRACT–

More vulnerable to infection in smokers and older adults

THE LITTLE GARAGE
Ra

Experience counts

Ceclor® Pulvules® 250 mg
cefaclor

think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS

Administer cautiously to allergic patients

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics It must be considered in differential diagnosis of antibiotic-associated diarrhea Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it
- Prolonged use may result in overgrowth of nonsusceptible organisms
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old Ceclor penetrates mother's milk Exercise caution in prescribing for these patients

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include
- Gastrointestinal (mostly diarrhea). 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever). 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor No serious sequelae have been reported Antihistamines and corticosteroids appear to enhance resolution of the syndrome
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported
- Other. eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis, elevations in BUN or serum creatinine
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061088L]

Additional information available from
Eli Lilly and Company, Indianapolis, Indiana 46285

PV 2351 AMP

Lilly

Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

© 1988, ELI LILLY AND COMPANY

CR-5012-B-849345

ARMY RESERVE MEDICAL PROFILE NO. 5

ROSALYN P. STERLING-SCOTT, M.D.

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

❝The caliber of physicians you meet in the Army Reserve exposes you to new ways of looking at a problem. It's easy for young surgeons to become entrenched in one method, but in the Army Reserve you'll have the chance to work with outstanding physicians in your own specialty, and often learn new ideas that will help you to improve your own approach to clinical or research problems," says Dr. Sterling-Scott.

The Army Reserve can offer physicians a variety of challenging options such as teaching, research, unique training programs, and the opportunity to practice in prestigious Army medical centers.

"Joining the Army Reserve enabled me to take advantage of a number of conferences, including one at Walter Reed, where I worked with thoracic surgical colleagues, while conducting my own research project.❞

We understand the time demands on a busy physician. So the Army Reserve offers training programs that will allow you to be flexible about the time you serve.

For more information about specific programs, call toll-free 1-800-USA-ARMY.

ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.

supports his work in blood platelet receptors and signal transduction mechanisms. Shukla presented his platelet project in May at the Third International Conference on Platelet Activating Factor in Tokyo.

■ Five members of the MU School of Medicine's department of surgery have been promoted: **James Austin, M.D.**, from assistant professor to associate professor (general); **Jack Curtis, M.D.**, chief of the division of cardiothoracic surgery, from associate professor to professor; **Robert Gaines, M.D.**, from associate professor to professor (orthopedics); **W. Kirt Nichols, M.D.**, from associate professor to professor (general); **Dean Nierling, M.D.**, from assistant professor of clinical surgery to associate professor.

■ **Sarvam TerKonda, M.D.**, was the first Michael E. DeBakey Scholar in Cardiothoracic Surgery. The award was established by the division of cardiothoracic surgery in 1988 to honor the medical student best exemplifying excellence in attitude and accomplishment while rotating on cardiothoracic surgery in a clinical or investigational appointment.

■ **Zyblut Twardowski, M.D.**, professor of nephrology, gave presentations on peritoneal dialysis at four European conferences and workshops in June in Goteborg, Sweden, and followed with presentations to groups in Denmark, England and Switzerland.

■ Members of the MU department of psychiatry participating in the May annual meeting of the American Psychiatric Association in San Francisco included **Bernard Beitman, M.D.**, professor, **Imad M. Al-Basha, M.D.**, assistant professor, **Javad Kashani, M.D.**, professor, and **Syed Arshad Husain, M.D.**, professor.

■ **Susan Winkelmann, M.D.**, joined the department of obstetrics and gynecology in July as a clinical instructor. She received her M.D. degree in 1984 at MU and completed an obstetric and gynecology residency at the University in June.

St. Louis University

■ **Joel C. Eissenberg, Ph.D.**, assistant professor of biochemistry, St. Louis University School of Medicine has been awarded a four-year, $357,297 grant from the National Institute of General Medical Sciences. Dr. Eissenberg will use the award to research "Molecular Cytogenetics of Heterochromatin."

■ **Michael Green, Ph.D.**, professor of microbiology, St. Louis University School of Medicine, has been awarded a three-year, $299,072 grant from the National Institute of General Medical Sciences. Dr. Green will use the award to study the "Regulation of ER Synthesis in Lymphocyte Differentiation."

■ **George T. Grossberg, M.D.**, associate professor of psychiatry and human behavior and director of the geropsychiatry division, St. Louis University School of Medicine, has been elected president of the American Association of Geriatric Psychiatry (AAGP). The AAGP represents geriatric psychiatrists throughout the United States and Canada.

■ **Arnold J. Kahn, Ph.D.**, professor of pediatric/adolescent medicine, St. Louis University School of Medicine, and director of the Pediatric Research Institute at Cardinal Glennon Children's Hospital, has been awarded a $119,271 renewal grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases.The grant will fund part of a continuing eight-year, half-a-million-dollar study of the "Biochemical Characterization of Osteoclasts" that began in 1986.

■ **Robert B. Belshe, M.D.**, was named professor and director of the division of infectious diseases in the department of internal medicine, St. Louis University School of Medicine, effective July 1. Dr. Belshe comes to St. Louis University Medical Center from Marshall University in Huntington, W.V., where he served as professor and director of the division of infectious diseases.

■ **John E. Morley, M.D.**, has been appointed director of the new division of geriatric medicine in the department of internal medicine, St. Louis University School of Medicine, in July. Dr. Morley comes to St. Louis University Medical Center from the University of California at Los Angeles (UCLA). Since 1985, he has held the titles of professor of medicine, director of Geriatrics Research, education and Clinical Center (GRECC), and has served as chief of geriatrics at Sepulveda Veterans Administration Medical Center and UCLA's San Fernando Valley Program.

■ **Lindbergh S. Sata, M.D.**, Fordyce professor and chairman of the department of psychiatry and human behavior, St. Louis University School of Medicine, has been elected co-vice president of the American Association for Social Psychiatry for a two-year term. He was installed during the American Psychiatric Association's (APA) annual meeting in May.

■ **Jean deBlois, C.S.J., R.N., Ph.D.**, has been named associated director of the Center for Health Care Ethics, St. Louis University Medical Center, effective in July. She has served as associate for the Center since 1988. In addition to her duties at the Center, Sister deBlois is a consultant for Ethical Issues for the Health Care Corporation of the Sisters of St. Joseph of Carondelet.

■ Two researchers at St. Louis University Medical Center have succeeded in "turning off" the trigger mechanism that causes the AIDS virus to replicate itself within a cell. The scientific breakthrough could lead to an effective drug therapy for AIDS. Further, this discovery points to a possible gene therapy that would block the development of AIDS in individuals who have tested positive for antibodies to HIV (human immunodeficiency virus, or AIDS virus).

Maurice Green, Ph.D., professor and chairman of the Institute for Molecular Virology, St. Louis University School of Medicine, and **Paul M. Lowenstein**, research associate, made the exciting discovery after working more than two years to analyze the sophisticated mechanism by which the AIDS virus regulates its growth. Their findings appeared in the July 14 issue of *Cell* magazine.

In addition, Dr. Green has received a three-year, $589,395 grant from the National Institute of Allergy and Infectious Diseases. The grant will be used to conduct further research by Drs. Greene and Lowenstein on the trigger mechanism of the AIDS virus.

■ **Mark F. Jacquin, Ph.D.,** professor of anatomy and neurobiology, St. Louis University School of Medicine, has received a five-year, $721,891 renewal grant from the National Institute of Dental Research of the National Institutes of Health. The grant will support research examining trigeminal (fifth cranial nerve) brainstem circuitry.

■ **Randy Strong, Ph.D.,** associate research professor of internal medicine in the division of geriatric medicine, St. Louis University School of Medicine, received a one-year, $20,000 grant from the Curators of the University of Missouri Alzheimer's Advisory Committee. The grant will support research examining the "Mechanism of Degeneration of Cholinergic Neurons in Alzheimer's Disease."

■ Two St. Louis University School of Nursing faculty members were corecipients of a one-year, $15,000 competitive grant from the American Association of Critical-Care Nurses (AACN).

Patricia Dettenmeier, M.S.N., pulmonary nurse specialist, and **Anne Perry, M.S.N.,** critical care education coordinator for The University Hospital, will study "Validation of a Weaning Score Instrument for Mechanically Ventilated Patients."

■ **Ian C. Balfour, M.D.,** associate professor of pediatrics in the division of cardiology, St. Louis University School of Medicine, has been awarded a one-year, $12,799 grant by the American Heart Association. The grant will be used to study "Systolic and Diastolic Function in Left Ventricular Volume Overload."

■ It is estimated that millions of men in the United States suffer from prostate problems. Of those, only one-fourth are able to get relief through surgical procedures. St. Louis University Medical Center is now evaluating a unique non-surgical approach to treat prostate problems. The procedure, called "Trans-Urethral Prostatoplasty (TUPP), or balloon dilation, is less expensive and less time-consuming.

Raul Parra, M.D., assistant professor of surgery in the division of urology, heads the team investigating the success of TUPP.

■ **Rodney M. Coe, Ph.D.,** professor in the department of community medicine, St. Louis University School of Medicine, has been appointed chairman of that department, effective July 1, 1989.

Dr. Coe replaces **Max Pepper, M.D., M.P.H.,** who served as professor and chairman of the department of community medicine for 20 years. Although Dr. Pepper is resigning as chairman, he will retain his faculty position at St. Louis University School of Medicine.

■ **Kevin J. Martin, M.D.,** has been appointed professor and director of the division of nephrology in the department of internal medicine, St. Louis University School of Medicine, effective July 1. Dr. Martin comes to St. Louis University School of Medicine from Washington University where, since 1984, he has served as associate professor of internal medicine in the renal division.

■ **Judy Messerle,** director of the St. Louis University Medical Center Library, left her post on June 30 to accept the position of Librarian of Harvard Medical School and Boston Medical Libraries at the Francis A. Countway Library of Medicine.

■ The ribbon-cutting and dedication of the Norma Jean Frank Hemodialysis Unit at St. Louis University Medical Center took place on June 29, at The University Hospital.

The new unit has been built through donations totaling more than $225,000 made by medical center employees in honor of the late Norma Jean Frank, who served as assistant administrator for the hospital before her death in 1984.

■ The University Hospital at St. Louis University Medical Center has been awarded a dual-state designation as a Level 1 Trauma Center, serving both Missouri and southern Illinois.

■ St. Louis University Medical Center announced the establishment of the Lichtenstein Institute for Health Promotion and Disease Prevention in July with a generous gift from the David Lichtenstein Foundation of St. Louis.

■ The Department of Community Health in the Center for Health Services Education and Research, St. Louis University Medical Center, was renamed as the department of public health in July. The name change reflects the growing importance of public health concerns such as the environment, care for the uninsured, and the control of AIDS in contemporary America.

■ **Sherin U. Devaskar, M.D.,** associate professor of pediatrics in the division of neonatology, St. Louis University School of Medicine, has been awarded a five-year, $340,965 grant from the National Institute of Child Health and Human Development.

Dr. Devaskar will use the award to research the "Developmental Regulation of Neuronal Insulin-like Peptide." The study will seek to understand factors that regulate brain development.

Washington University

■ **Ming-Shian Kao, M.D.,** has been named director of the Division of Gynecologic Oncology in the Department of Obstetrics and Gynecology at Washington University School of Medicine in St. Louis

Kao is professor of obstetrics and gynecology at the School of Medicine. he has twice been named Teacher of the Year by former residents, and was given the First Annual Chief Residents' Award in 1983.

■ The Department of Ophthalmology at Washington University School of Medicine in St. Louis has received an unrestricted grant of $45,000 from Research to Prevent Blindness (RPB).

■ Five teachers from St. Louis high schools are participating in a pilot research project designed to introduce and attract students to the biomedical sciences. As part of the project, they are working for one month as active partners in immunology labs at the School of Medicine and Jewish Hospital. Based on their laboratory experience, each will develop an instructional activity in immunology for their classrooms. Coordinating the project are **Carl Pierce, M.D., Ph.D.**, and **Judith Kapp-Pierce, Ph.D.**, both faculty members at Washington University School of Medicine. They co-chair the education committee of the American Association of Immunologists (AAI), which is sponsoring the program along with the Biological Sciences Curriculum Study (BSCS), a national organization that researches and develops innovative instructional materials for science education.

■ Two faculty members at Washington University School of Medicine in St. Louis have been elected members of the prestigious Institute of Medicine of the National Academy of Sciences. **Harvey R. Colten, M.D.**, and **C. Robert Cloninger, M.D.**, are two of 40 new members of the institute.

Colten is Harriet B. Spoehrer Professor and head of the Department of Pediatrics at the School of Medicine. Cloninger is professor of psychiatry and genetics at the School of Medicine and, effective July 1, became head of the Department of Psychiatry.

■ **Janet Ruth Todorczuk, M.D.**, has been selected as the first Smith Kline & French Advanced Clinical Gastroenterology Fellow at Washington University School of Medicine in St. Louis. Todorczuk joined the Division of Gastroenterology July 1. The one-year fellowship will enable her to pursue her interest in clinical gastroenterology.

■ The Program in Physical Therapy at Washington University School of Medicine in St. Louis will offer a doctoral program beginning in September.

Designed to prepare researchers in movement science, the doctoral program will be directed by **Shirley Sahrmann, Ph.D.**, associate professor of physical therapy, neurology and neurological surgery, and instructor of cell biology and physiology.

■ **Roger L. Mell, M.D.**, has been named president of the Washington University School of Medicine Alumni Association. Mell, an orthopedic surgeon at St. Luke's Hospital, is president of the Southern Medical Association as well as the St. Louis Orthopedic Society. He graduated from the School of Medicine in 1965.

■ Distinguished scientists throughout the United States presented a day-long symposium May 12 to mark the 25th anniversary of the Biomedical Computer Laboratory (BCL) and the Computer Systems Laboratory (CSL) at Washington University in St. Louis.

The symposium titled "Computer in Biomedicine: Issues and Challenges," featured a keynote address by **William F. Raub, Ph.D.**, deputy director of the National Institutes of Health (NIH), whose Division of Research Resources has funded the BCL and CSL programs since their inception.

■ The director of the Lipid Research Center at Washington University School of Medicine received a $1.1 million grant to study the role of certain blood proteins in causing atherosclerosis.

The grant, from the National Institutes of Health, was awarded to **Gustav Schonfeld, M.D.**, Kountz Professor of Medicine in the Department of Internal Medicine.

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.**, P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Arkansas Dept. of Health **656**

Army Reserve **612, 658A**

Eli Lilly **658B**

Forrest T. Jones **642**

Fred S. James **623**

Invest in Missouri Program **650**

Jackson & Coker **648**

Medical Defense Associates **624**

Medical Protective Company **646**

MOMEDICO **606**

Omaha Mid-West Clinical **656**

Palisades Pharmaceuticals **648**

PIE Mutual Insurance Company **666**

Roche **667, 668**

Risk Control Associates **610**

Senior Patient **641**

United Missouri Banks **644**

Wes Woodbury **608**

Missouri Physicians' Health Committee

Jack Croughan, M.D.
Medical Director
1034 S. Brentwood, #970
St. Louis, MO 63117
314/725-4004
answering service 314/768-4990

Carl C. Pearman, M.D.
Chairman
1443 N. Robberson #803
Springfield, MO 65802
417/885-4191

Karen Sanders, BSN, RN
Program Coordinator
3839 Lindell Blvd.
St. Louis, MO 63128
314/768-4990

Thomas M. Ahmann, M.D.
Landmark Building
Mexico, MO 65265
314/581-7582

Thomas R. Anderson, M.D.
204 Berrywood Medical Arts Bldg.
3401 Berrywood Dr.
Columbia, MO 65201
314/449-2661

Hugh C. Bartlett, M.D.
1501 E. 10th, Suite B
Rolla, MO 65401
314/364-6051

Jack Carmody, M.D.
10004 Kennerly Rd. #386B
St. Louis, MO 63128
314/843-2151

James R. Criscione Jr., M.D.
3825 S. Kingshighway
St. Louis, MO 63109
314/352-7003

Edward C. Felker, III, M.D.
1118 N. Main
Sikeston, MO 63801
314/471-6992

Edward M. Grim, M.D.
3105 McClelland Blvd.
Joplin, MO 64804
417/623-3703

K.P.S. Kamath, M.D.
35 Doctors' Park
Cape Girardeau, MO 63701
314/334-4002

David S. Martin, M.D.
14603 Big Timber
Chesterfield, MO 63017
314/532-9294

Donald McIntosh, M.D.
300 S.W. Green Teal
Lee's Summit, MO 64063
816/537-7344

Jo-Ellyn M. Ryall, M.D.
9216 Clayton Road
Suite 105
St. Louis, MO 63124
314/868-7700

Classifieds

Physicians Wanted

INTERNAL MEDICINE — SPRINGFIELD, Mo: Join 6-physician IM group; expanding practice, primary and critical care; affiliation with several major hospitals; optional teaching activities; call shared equally; competitive salary/ benefit package; 230,000 metro population; CONTACT: Phil Kelbe 1-800-338-7107.

MISSOURI: Immediate opening for full-time or part-time emergency physician in 120-bed hospital in community of 10,000 in southeast Missouri. 9,000 visits annually. ACLS, ATLS required. Send CV to Comprehensive Emergency Care, Inc., P.O. Box 565, Kennett, MO 63857; 314/888-1511.

ANESTHESIOLOGIST, BC/BE, needed to join group of 4 MDs and 7 CRNAs in a modern 250-bed hospital in Kansas City. Wide variety of cases, including OH and OB. Salary leading to partnership. Contact: **M.A. Chernoff, M.D.**, 8929 Parallel Parkway, Kansas City, Kansas 66112.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Gus Murphy, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST — Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). For information contact: Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

FAMILY PRACTICE — HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hospital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar opportunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435; 612/835-5123.**

HEALTHLINE PHYSICIAN SERVICES, an affiliate of St. Louis University Medical Center, is recruiting for an Emergency Department Medical Director and Staff Physicians at Hannibal Regional; Hannibal, Missouri. Growth oriented program in historic Missouri river town. Good compensation, benefits, paid liability. Part-time/locum tenens also available. Contact William J. Salmo, HealthLine Physician Services, 3663 Lindell Blvd., Suite 410, St. Louis, Missouri 63108; 1-800-443-3901.

E.R. PHYSICIANS/PART-TIME — Liberty Healthcare Corp., a 12-year-old medical management corporation, has part-time positions available in moderate volume ERs in several facilities in the midwest. We offer competitive salary and paid malpractice. Shifts available to suit your particular schedule. We seek physicians with E.R. experience. If you are a 2nd-year EM resident, 3rd-year FP or IM resident, Liberty Healthcare can provide you with worthwhile, rewarding part-time career opportunities. For more information, call E.R. specialist, Annamarie Alleva, 1-800-331-7122 toll free or send C.V. to: **Liberty Healthcare Corp.**, Dept 0, 399 Market Street, Philadelphia, PA 19106. EOE.

SURGEON OPPORTUNITY. Immediate opening for general surgeon in rural Nebraska. Board certified or board eligible. Must be licensed in Nebraska. Excellent benefits. Great hunting and fishing. Wallace & Panzer, M.D., P.C., 807 N. Ash, Gordon, NE; phone 308/282-1164.

Kaiser Permanente - Kansas City

The Kaiser Permanente Program is seeking BC/BE physicians in the following area:

OB-GYN

- Competitive Salaries/Benefits
- Fully Paid Malpractice Insurance
- Academically Affiliated Program
- Malpractice Tail Coverage Considerations

Send CV or call:

Larry V. McDonald, M.D.
6900 Squibb Rd., Suite 200
Shawnee Mission, KS 66202
913/384-9090

ANESTHESIOLOGISTS NEEDED: Great opportunity for **two BE/BC anesthesiologists** to provide anesthesia services in rural community hospital one hour from St. Louis. Full backup available from St. Louis-based anesthesia group. Most facets of a challenging anesthesia practice including OB are available to satisfy every professional need. Those interested please send CV to: Western Anesthesiology Associates, Inc., 621 S. New Ballas Road, Suite 629, St. Louis, Missouri 63141.

PRACTICE OPPORTUNITY. Rural Missouri FP currently being operated on part-time basis with excellent full-time possibility. Priced at less than potential one year gross. Includes building with attractive owner financing. Call or write: **Practice Support Resources**, 7001 N. Locust, Suite 202, Gladstone, MO 64118. 1-816/436-6119.

PHYSICIANS NEEDED: Family Practice — Internal Medicine; Oncology —

Physicians Wanted

Endocrinology; Neurosurgery – Neurology; General Surgery – Orthopedic Surgery. Group practice, solo, or urgent care settings available through our hospital network located in Macon and serving all of Middle Georgia. Your practice will be located 80 miles south of Atlanta, in a growing family-oriented community, where you can avoid traffic and enjoy a rewarding professional career. Please contact Stephen Wofford at 912/741-6283 for a confidential consultation or write: P.O. Box 4627, Macon, Georgia 31208.

SOUTHEASTERN IOWA – Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

EXCELLENT OPPORTUNITY for an internist to become associated with a 13-physician multi-specialty group located in St. Charles, Missouri. St. Charles is an excellent community to raise a family, excellent school systems, easy access to the St. Louis metro area for recreation, entertainment, with a general service area potential of 120-150,000 residents. Guaranteed first year with excellent fringe benefits and an established practice. Reply to **File #25**, C/O *Missouri Medicine,* 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

UROLOGIST – Join the nation's largest health care team. VA Medical Center, Lincoln, Nebraska, seeking BC/BE Urologist for progressive 180-bed Medical Center. Licensure any state. Must meet English Proficiency Requirement. Lincoln is a university town with small-town atmosphere and metropolitan advantages. Lincoln VA Medical Center is affiliated with the the University of Nebraska for Urology Resident Program. Comprehensive benefits package. Allowable moving expenses payable. Contact Dr. Hirai, VA Medical Center, 600 So. 70th St., Lincoln, NE 68510, telephone 402/489-3802, Ext. 6750, or Personnel Service, 402/486-7819.

Practice for Sale

FOR SALE, GENERAL PRACTICE, gross $200,000/year; 90% third party pay. Retiring after 40 years successful medical practice. Solo or group. Fully equipped brick medical building with income from rentals, also for sale, or rent with option to buy after 1 year. St. Louis Suburb, P.O. Box 5711, St. Louis, MO 63121.

Real Estate

BAILEY PROPERTIES, INC., is a statewide real estate and management company that deals exclusively in land and farm sales. Our goal is to bring willing land owners and interested land buyers comfortably together to maximize the financial, recreational, agricultural and other personal advantages that come with the ownership of rural properties. Call or write Bailey Properties for more information. **Bailey Properties, Inc.,** 6356 Clayton Road, St. Louis, MO 63117. 314-863-LAND.

FAMILY PRACTICE/OFFICE BUILDING FOR SALE. With equipment & furnishing in South St. Louis County; for immediate continuous practice, option to buy building. 1300 sq. ft. office space on approximately 1/2 acre lot with 15-car parking lot. Price negotiable. Send inquiry to: **Midwest Management,** P.O. Box 31516, St. Louis, MO 63131.

Investment

$5,000-$60,000: FOR PHYSICIANS – Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Position Wanted

RESIDENCY WANTED: Recent Graduate, University of Missouri-Columbia School of Medicine, desperately seeks PGY-1 training position, any specialty (primary care preferred). **Program Chiefs:** Please give me a chance. All replies confidential. Both M.D. and D.O. programs equally considered. Midwest preferred, but will consider relocating. Reply to: **File #24,** C/O *Missouri Medicine,* 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

BC/BE INTERNISTS AND FAMILY PRACTITIONERS

A balanced lifestyle, competitive income and freedom to practice quality medicine. Opportunities to join a unique primary care practice in the Chicago/St. Louis areas. Excellent financial package includes income guarantee, bonus incentive and potential for profit sharing. No billing or HMO headaches.

Send C.V. to:

Lori Jones
MedFirst Medical Management, Inc.,
5515 North Cumberland Avenue,
Suite 808,
Chicago, Illinois 60656.
Or call COLLECT: (312)774-3443.

MedFirst℠ Medical Management, Inc. PRIMEDICAL Physician Care Centers

CHICAGO **ST. LOUIS**

PIE's quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. PIE Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

QRP FACTS:

Strict Underwriting Criteria – Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

Scheduled Premium Reductions – Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

High Limits – Backed by our reinsurer, Lloyd's of London, PIE is able to offer higher coverage limits for qualifying doctors: up to $7 million for individual doctors and $13 million for group policies. Lloyd's of London is the largest reinsurer in the world.

Designed With Input from Doctors – PIE's QRP plan is an innovative modified claims-made insurance specially designed with input from PIE-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your PIE representative, or our headquarters office today.

The PIE Mutual
Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth Street
Cleveland, OH 44114
(216) 781-1087

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

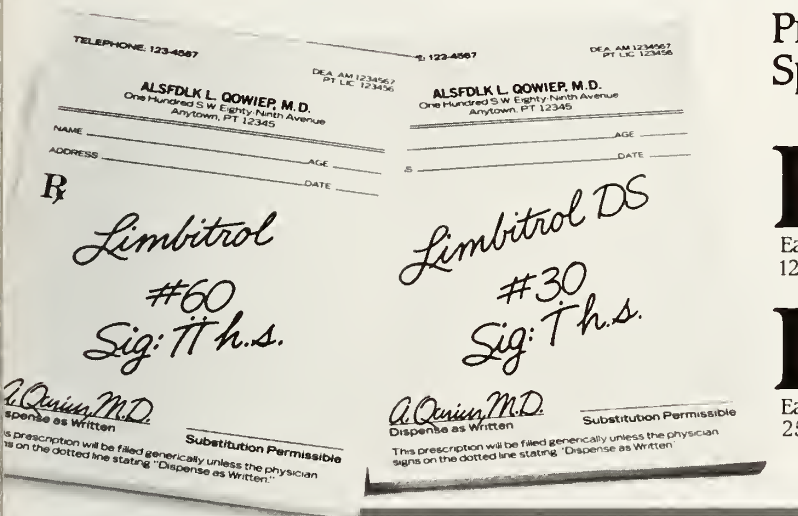
AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410
(800) 821-5401

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



TELEPHONE: 123-4567
DEA AM 1234567
PT LIC 123456
ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345
NAME
ADDRESS
AGE
DATE
℞
Limbitrol
#60
Sig: ii h.s.
A. Quinn, M.D.
spense as Written
Substitution Permissible
s prescription will be filled generically unless the physician
ns on the dotted line stating "Dispense as Written."

123-4567
DEA AM 1234567
PT LIC 123456
ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345
AGE
DATE
S
Limbitrol DS
#30
Sig: i h.s.
A. Quinn, M.D.
Dispense as Written
Substitution Permissible
This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written"

Protect Your Prescribing Decision:
Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

Limbitrol® Ⓒ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE **Roche Products**

Roche Products Inc
Manati, Puerto Rico 00701

PI 0288

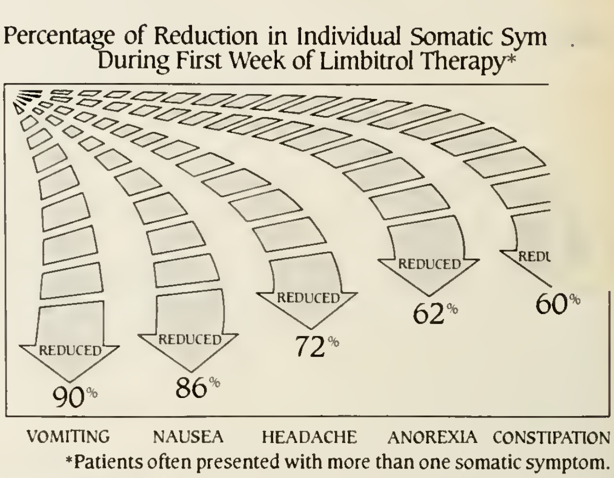
In the depressed and anxious patient

See Improvement In The First Week[1]

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.



Percentage of Reduction in Individual Somatic Sym
During First Week of Limbitrol Therapy*

*Patients often presented with more than one somatic symptom.

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

ROCHE Roche Products

Copyright © 1989 by Roche Products Inc. All rights reserved.
Please see summary of product information inside back cover.

EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

Journal of the Missouri State Medical Association

October 1989

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

OCT 14 1989

DISPLAY
SHELVES

You didn't go into medicine to become a human target.

Every day you put your reputation and practice on the line. And, with the increasing barrage of malpractice claims, your business has become a virtual firing line.

Now, you can do something about it. Protect yourself with MOMEDICO. We're the only physician owned professional liability insurance company founded and endorsed by the Missouri State Medical Association. MOMEDICO is a stock insurance company rather than a mutual assessable company. The overwhelming majority of our stock and policy holders are Missouri physicians.

At MOMEDICO we are proud of our reputation for highly trained and totally committed field service representatives. Our reputation for results is outstanding, too. Of all cases handled to conclusion, over 80% were closed without any payment of indemnity. So, if you find yourself on the firing line, MOMEDICO is the company that lines up to protect you.

MOMEDICO. . .the best company a physician can keep.

MOMEDICO

Better Protection. Together.

10795 Watson Road
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

Contents

Missouri Medicine

Editor	Donald G. Sessions, M.D.
Associate Editor	Ramona M. Chapman, M.D.
Editor Emeritus	Jordan W. Burkey, M.D.
Managing Editor	Susan Flanigan Gold
Editorial Assistant	Valerie A. Peters

Editorial Board

Anesthesiology	Mark G. Zukaitis, M.D.
Cardiovascular Surgery	Jack J. Curtis, M.D.
Dermatology	Philip C. Anderson, M.D. John DeSpain, M.D. Ernest Lorenc, M.D.
Emergency Medicine	David M. Trantham, M.D.
Family Practice	William D. Bradshaw, M.D. Carl R. Kruse, M.D. Kirby L. Turner, M.D.
Gastroenterology	Jay P. Marshall, II, M.D.
Hematology	William H. Crosby , M.D.
Internal Medicine	John S. Daniels, M.D. Stephen Hamburger, M.D. Robert K. Skillman, M.D.
Neonatology	Elizabeth J. James, M.D.
Neurosurgery	Keith Rich, M.D.
Obstetrics and Gynecology	James Daly, M.D.
Oncology	Michael C. Perry, M.D.
Ophthalmology	John C. Hagan, III, M.D. F. Thomas Ott, M.D.
Orthopedics	William P. Thorpe, M.D.
Otorhinolaryngology	J. Regan Thomas, M.D.
Pathology	Scott A. Martin, M.D.
Pediatrics	R. Don Blim, M.D.
Physical & Rehabilitation Medicine	Martin B. Wice, M.D.
Plastic Surgery	Leroy Young, M.D.
Psychiatry	William F. Clary, M.D. J.C. Corvalan, M.D.
Radiation Therapy	MacDonald B. Logie, M.D.
Radiology	Donald R. Germann, M.D.
General Surgery	Mark S. Cotner, M.D. Richard O. Craig, M.D. Donald Silver, M.D. Michael Metzler, M.D.
Vascular Surgery	Kirt Nichols, M.D.
Urology	George M. Austin, M.D.

Publications Committee

Chairman	Donald G. Sessions, M.D.
Vice-Chairman	Ramona M. Chapman, M.D.
Members	Jack J. Curtis, M.D. John S. Daniels, M.D. Stephen Hamburger, M.D.

Cover

Autumn in Missouri is depicted in a photograph of a Britanny Spaniel. **Thomas E. Ford, M.D.,** photographed the dog on the family farm near *Martinsburg, Missouri.* Dr. Ford is a graduate of the University of Missouri School of Medicine in Columbia. He now practices ophthalmology in Niagara Falls, New York, and maintains his membership in the St. Louis Metropolitan Medical Society.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
OCT 12 1989

Special Series

685 Initial Clinical Management of the HIV-Infected Patient
William G. Powderly, M.D., *St. Louis, Missouri*

Scientific Articles

689 Acute Leukemia After Adjuvant Chemotherapy for Breast Cancer
Nashat Y. Gabrail, M.D.,
St. Louis, Missouri

691 Human Ehrlichiosis
Farrin A. Manian, M.D., John Weidner, M.D., and John Costello, M.D. *St. Louis, Missouri*
Daniel B. Fishbein, M.D., and Jacqueline E. Dawson, M.S., *Atlanta, Georgia*

696 Late Occurrence of Aortoenteric Fistula
Alfred D. Harding, M.D., and
W. Kirt Nichols, M.D. *Columbia, Missouri*

Departments

675 Editor's Desk
677 President's Page
679 Auxiliary Message
681 Practice Management
701 New Members
703 In Memoriam
705 Medical School News
710 Physician's Recognition Award
713 CME
716 Information for Contributors
716 Advertising Index
719 Classifieds

Three Vital Prescriptions For A Happy Retirement…

All In One Comprehensive Program

The MSMA Retirement System

1 **Pre-Retirement Planning**

Through Prudential-Bache, MSMA provides a program for building and protecting your wealth. This program assesses your current financial condition and provides you with a coordinated plan to help you secure your financial goals.

2 **Business & Retirement Planning**

Through Prudential-Bache and Trust Consultants, MSMA provides a program with considerable benefits:

- ☐ Self-trusteeship of plans
- ☐ Fast, accurate plan design
- ☐ Complete administration
- ☐ Access to country's top money managers

3 **Post-Retirement Planning**

As you approach your well-earned retirement, your MSMA member benefit provides a decision-making tool, through Prudential-Bache, to coordinate a selection of settlement options and tax treatment for retirement plans. Estate planning is assessed when necessary.

Many MSMA members have already put the MSMA Retirement System to use. Why not you? The details are now available on audio tape. For your free copy, call us today or send in the coupon below.

MSMA Retirement System c/o Prudential-Bache Securities
231 S. Bemiston Ave., St. Louis, MO 63105
ATTN. Michael G. Grimes
314-721-9200, toll free **1-800-877-9200**

☐ Yes, send me a MSMA Retirement System audio tape today!

Name Address

City State Zip Phone ( )

Clients, please give name and office of Account Executive

Missouri State Medical Association

© 1989 Prudential-Bache Securities Member SIPC

Missouri Medicine

l. 86, No.10 *Journal of the Missouri State Medical Association* October 1989

MSMA PHONE BOOK

Missouri State Medical Association	314/636-5151
FAX	314/636-8552
American Medical Association	312/645-5000
MSMA Physicians' Health Program	314/768-4990
MOMEDICO	1-800-392-8039
Dodson Insurance Group	1-800-825-3760
MSMA Retirement Plan/ Prudential-Bache Securities	1-800-877-9200 314/721-9200
Forrest T. Jones	1-800-892-7272
Fred S. James	KC 1-800-892-7105 St. Louis 1-800-445-9513
Health Care Financing Administration	816/426-5233
INTRAV	314/727-0500
Medicaid Provider Relations	1-800-392-0938
Medicare Provider Relations	1-800-392-3070
Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
Missouri Department of Health	314/751-6400
Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	(Preadmission) 1-800-392-8060 (General info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs	314/751-8042
Missouri State Board of Registration of the Healing Arts	314/751-2334

MSMA Officers

President	Marvin A. Singleton, M.D., *Joplin*
President-Elect	Gary A. Dyer, M.D., *St. Joseph*
Secretary	Norman P. Knowlton, III, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Clarence A. Martin, M.D., *Joplin*
Vice President	Jack Kayes, M.D., *St. Louis*
Vice President	Barbara Buchanan, M.D., *Kansas City*
Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*
Vice-Speaker	James B. Wolfe, M.D., *Springfield*

Councilors

Dorothy D. Reister, M.D., *Shawnee Mission,* Chairman
Carol F. Williams, M.D., *St. Louis,* Vice Chairman

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *Florissant*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Peters*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A.J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Robert T. Gibbons, Jr., M.D., *Overland Park, KS*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Ms. Laura Carlson, medical student, *Kansas City*
Charles Barbee, M.D., *Columbia*
Charlene Prather, M.D., *Kansas City*

Vice Councilors

Robert Schaaf, M.D., *Gower*
Carl R. Kruse, M.D., *Palmyra*
Meredith C. Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Jay Yedlin, M.D., *Kansas City*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Ms. Lora Mills, medical student, *Columbia*
Paul Petruska, M.D., *St. Louis*
Carla Siegfried, M.D., *St. Louis*

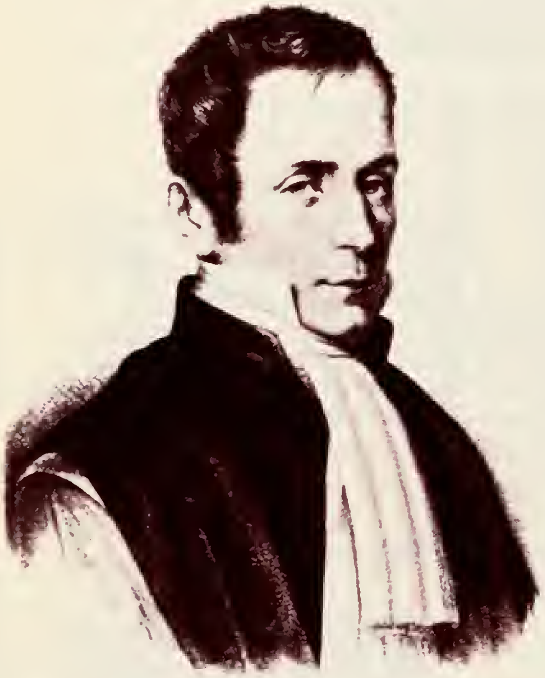
AMA Delegates

Keith Ashcraft, M.D., *Kansas City*
Vernon Balster, M.D., *St. Louis*
George Bohigian, M.D., *St. Louis*
Walter German, M.D., *Springfield*
Melvin C. Kasten, M.D., *Cape Girardeau*
Robert R. MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251
Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.
Subscription rates: $20 per year.
Second class postage paid at Jefferson City, Missouri and at additonal mailing offices.
Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.
Copyright 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

BE AS LOFTY AS LAËNNEC WITHOUT LETTING YOUR BUSINESS SUFFER.



René Théophile Laënnec, (1781-1826) the French physician who developed the stethoscope.

Laënnec was a genius in diagnosis, but his practice fell flat. *StrategiCare* could have helped him be a genius in both.

In his time it was said that while Laënnec was "without rival in diagnosis, he was not a good practitioner," according to historians. The famous man who authored "De l'Auscultation Médiate" and developed the stethoscope had no business and marketing strategy to give his diagnostic methods credibility or build a sound practice. His findings helped to isolate the symptoms of tuberculosis, yet he was considered misguided in treatment.

Today, *StrategiCare* helps medical practitioners position themselves so patients understand, trust and come back to them. Most importantly, we help physicians meet their business goals. Our experience in managing health care practices over the last two decades has led us to integrate the essential aspects of business—management, computer systems, business development, personnel hiring, business forms and office furnishings—so that health care professionals realize profitability and have more time for the care of their patients.

StrategiCare helps physicians succeed in health care and in business.

BUSINESS DEVELOPMENT • BUSINESS FORMS • COMPUTER SYSTEMS
FURNISHINGS AND DESIGN • MANAGEMENT SERVICES• PERSONNEL SERVICES

Bringing Business Solutions to Health Care

StrategiCare®
INC.

4500 Main, Suite 900 • Kansas City, Missouri 64111
For more information, contact Theodore Boesen, 816-932-5357 or 800-331-4479

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

The questions of life and death are never easy. We'll never know if the path we chose was the right one.

Life and death

We are going through very challenging times. Major ethical issues encompass both ends of the life cycle. When does life begin? When does life end? When should life end? What is life anyway? Who knows the answers to these questions? Does the saying of it make it so? Does voting on it make it so? If we can give scientific proof does that make it so?

While we ponder these questions and advocates on opposite sides dig in for the long battle ahead it may be helpful to turn to the practical, real life side of these questions.

.......I remember how excited we were when she was born; how lucky we felt when we found out that she was healthy. We named her Desh. My wife and sons and I really didn't know what it was going to be like with another female in the house. I remember the day we brought Desh home and how we felt her arrival would make our family complete.

We were amazed at how quick she was to learn. She was extremely cute but also had an obstinate side. She would stop at nothing to have her own way. But she also had a way of coming up to you and rubbing against you with this half serious and half mischievous grin.

As the years went by, Desh matured faster than our sons had. She was beautiful with soft thick hair but her most spectacular feature was her blue eyes. She could look right through you — it was as if we could keep no secrets from her. It didn't matter; we had no need for secrets — we adored her. I remember when my wife and I took her for the first day of school. She was the prettiest in the class and her feisty actions immediately endeared her to everyone.

The interesting phenomenon was how the boys loved her. There were literally no signs of jealousy even when Desh wouldn't share her toys with them. I think this was partly because underneath her impishness she had a vulnerable side. For instance she was always very frightened by thunder and lightening and we all took turns holding her and taking care of her during storms.

Desh was ten years old when we noticed the swelling over the medial aspect of her right eye. It wasn't tender or painful. Her doctor treated it with antibiotics and when it didn't respond we got an x-ray. The film showed a suspicious lesion of the frontal sinus. We were devastated. We took her to the hospital for an outpatient biopsy. It showed carcinoma. I remember how I felt when the doctor told me the result. I took the slides to my pathologist and unfortunately he agreed with the diagnosis.

I remember asking myself, "how could this be happening? This just isn't fair — and with the rest of her life ahead of her." We talked to a specialist about treatment options. Repeat x-rays showed bone destruction with invasion into the dura. We chose not to put her through surgical excision. Because of the rapid expansion of

continued on page 678

Employee Benefit Rx.

Before choosing the *right* medical group employee benefit plan, there's a lot to consider.

For instance, how comprehensive should an employee benefit plan be? Should your plan include Individually Directed Account options or 401(k) provisions? How do you know if you need trustee, investment management or administration services? Or plan and participant record keeping?

We can help you answer these important questions and design a program to your exact specifications.

If you're looking for the right employee benefits program for your medical group, call the United Missouri Employee Benefit Division, soon. You'll find our experts are just the "prescription" you need.

UNITED MISSOURI BANK
Member FDIC

P.O. Box 419226 Kansas City, Missouri 64141-6226
P.O. Box 1126 St. Louis, Missouri 63188
Outside of Missouri, call 1-800-821-7194
In Missouri, call 1-800-892-2945.

President's Page

by Marvin A. Singleton, M.D.
MSMA President

In Missouri, we have the capacity to develop programs to benefit patients with limited access to health care and to develop plans that would also be satisfying and rewarding for physicians. Missouri physicians must decide now whether they will be leaders or followers in the search for solutions to the problems facing medicine today.

To Lead or to Follow

Some 11 months after Missouri's voters overwhelmingly defeated the MedAssist proposal providing indigent care in the state, the problems still exist. Webster's Dictionary describes *leadership* as "that capacity to lead." The Missouri State Medical Association and physicians of Missouri must now decide whether to take the lead in developing solutions to the problems facing medicine or simply allow themselves to be led. In Missouri we have the capacity to develop programs to benefit patients with limited access to health care, plans that would also be satisfying and rewarding for physicians.

There are several things that may improve the problems. One is the Missouri Physicians Services Task Force which has met throughout the summer developing recommendations for the state. The Task Force goal is to study ways to provide adequate, essential health care to all eligible recipients of welfare and maintain an adequate provider base. To put the program on more realistic terms for the FY 1990 Medicaid budget, the total amount is approximately $822 million with a physician-related appropriation of approximately 9% of the total.

But as our Governor said in his 1989 address, since the Department of Health's formation in 1985, eligibility for Medicaid supported individuals has been broadened and expanded. At the same time, the legislature has not continued to appropriate funds to maintain the access level or reimbursement rate. The Governor also stated that dramatic steps to serve the health needs of the poor through expansion of the Medicaid program were being undertaken. Access to health care would be opened thanks to increased state resources for local hospitals and public health programs. The result is an $800 million program with expansions and promises that result in eligibilities for a $1 billion program.

What we have is a difference of $200 million in what has been promised and what has been delivered in the form of appropriations. That is what makes the Missouri Physicians Services Task Force so important – this effort to establish priorities for the state and make recommendations according to budgetary boundaries.

In a previous editorial, I discussed "The Bitter Pill Rationing" that controlled health care costs by limiting the dollars and constricting the services for lack of payment. Unfortunately, the decision to throw people out of eligibility and squeeze the providers has been the approach of this state and of the federal government. This way of thinking requires physicians to bankrupt a practice to provide the care that is the state's financial responsibility. This idea persists on the federal level. However, the Missouri Physicians Services Task Force suggests a more logical approach using priorities, if the Legislature and the executive branch will only heed its suggestions.

Some of the positive preliminary recommendations from the Task Force involve following some of the same recommendations made in MSMA Resolution 13,

continued on page 678

President's Page
continued from page 677

passed during the 1989 Annual Session. Resolution 13 agrees that continued expansion of voluntary programs is inappropriate and recommends capping new programs until mandated programs see adequate reimbursement. It recommends adopting the Harvard Relative Value Fee Schedule as it becomes fine-tuned, and penalizing Medicaid recipients who abuse the system, particularly with unnecessary emergency room visits. I think that as the Task Force continues to study the issues, they will tend to gravitate to a remarkable program being developed in Oregon. In the June, 1988 Western Journal of Medicine, "Uncompensated Care, – The Treat and the Challenge" by John Kitzhaber, M.D., President of the Oregon Senate, gives a summary of that program. For anyone interested in the background of current problems, this article is a must.

Another encouraging development in Missouri has been the appointment of the Business Roundtable by Gary Stangler, Director of the Department of Social Services. This group's goals include studying three particular issues: Welfare reform, rising health care costs, and increasing demands on children's services. My only concern with the Business Roundtable is that with no physicians appointed to serve, it is made up of business people, with a strong emphasis in hospital board members. Therefore, I am concerned they may overlook the ethical issues associated with providing health care. The Roundtable must remember that due to low Medicaid reimbursement rates, huge numbers of poor people do not receive basic medical care. In the United States, we do, in fact, ration medical care by non-access.

The Oregon proposal says that society *should* pay for what it is *willing* to pay for, and these services must be ranked according to the number of beneficiaries who can be helped by them. Thus, limited funds will benefit the maximum number of patients possible. This makes extremely good sense.

Although this is a difficult time for health care providers, we in fact have an opportunity to make a choice: to lead or to be led. Let those of us who are involved in health care put our best minds together and contribute to a Missouri program now rather than later.

■

New AMA Department of Foreign Medical Graduates

Effective June 1, the AMA established the Department of Foreign Medical Graduates (FMGs). John Kasper, who served as an AMA Field Representative to Missouri and 14 other states, is the director of this department.

The department is officially charged with the following responsibilities: 1. Developing and implementing a variety of communication and liaison mechanisms with FMGs across the country; 2. With the advice of those FMGs, addressing the indentified concerns; 3. Communicating AMA programs and policies to FMGs; 4) Providing consultative and liaison services to members of the Federation of Medicine (state, county and specialty organizations) to expand the infrastructure for FMGs; and, 5. Developing and maintaining close liaison ties with officers and staff of national groups representing FMGs.

Kasper seeks input from Missouri's 2,000 FMGs. Comments may be addressed to John Kasper, AMA, 535 N. Dearborn, Chicago, IL 60610 or call 312/645-5624.

■ **Editor's Desk**
continued from page 675

the mass we decided to support her palliatively.

The family surrounded her with love. We expended all our efforts to take care of her but to no avail. The mass continued to enlarge and then became tender. She began to lose weight. I remember one evening especially. I was sitting on the deck and Desh was there beside me. I had a flash that she wasn't going to make it and there was nothing I could do about it. I just sat there quietly, with tears streaming down my face, not saying anything.

It became increasingly difficult for us to take care of her. She kept losing weight and getting weaker and in obvious pain. We had a family meeting and decided. It was clear that she was no longer our Desh and that the quality of her life was irretrievably lost. It was time.

My wife and I took Desh to the hospital that last day. We had made an appointment and the doctor concurred with our wishes. She was given a lethal injection and went to sleep. We all were relieved. It was time.

These questions of life and death are never easy. We'll never know if the path we chose was the right one. It certainly was the most humane way. Several weeks later I was discussing with a colleague how we had participated actively in our dog's demise. He got a real sense of the deeply held feelings families have for their dogs. "Yes," he said, "sometimes we treat our pets better than we do our families."

■

by Judy Corry
AMA-ERF Chairman

We all benefit from contributions to medicine via AMA-ERF.

AMA-ERF: Where does all that money go?

The American Medical Association Education and Research Foundation was established by the AMA Board of Trustees over 35 years ago to help support quality education in the nation's medical schools. Since 1950, the Foundation has distributed more than $48 million in gifts to medical schools, guaranteed over $95 million in loans benefiting more than 40,000 medical students, interns, and residents, and supported numerous research projects.

Today there are four funds under the AMA-ERF umbrella:

1. The medical school excellence fund, which provides grants to medical schools to use as they see fit.
2. The medical student assistance fund, which provides funds to medical schools for student financial aid.
3. The development fund is used at the discretion of the AMA-ERF Board of Directors to support pilot and experimental health and medical programs.
4. Categorical funds for specific research areas.

The medical school excellence fund is the oldest and the largest of the funds. The newest fund, the medical student assistance fund, was begun in 1983 to provide funds for medical schools to use in direct financial assistance for bona fide educational expenses for medical students recognized as being in need by the schools. These monies provide loans to medical students. The person who donates money to the Foundation can stipulate which medical school is to receive the contribution and also whether it will go toward medical excellence or the student assistance fund.

The deans of the four medical schools in Missouri have expressed their gratitude for the funds which have been given to their schools by the AMA-ERF. These funds have allowed their students to participate in and benefit from several programs which would otherwise be impossible. Dr. James J. Mongan, University of Missouri-Kansas City, said "We have utilized these funds for our medical students in a variety of ways, including student financial aid and travel expenses to attend local, state and national medical organization meetings, as well as a variety of other student activity efforts. We do appreciate the discretionary nature of some of these funds which allows us flexibility in supporting these activities."

The Washington University School of Medicine, with Dr. M. Kenton King as dean, has used the monies to support the educational expenses of the medical students by providing a scholarship for a deserving student on the basis of documented need. The unrestricted check "intended for the pursuit of excellence" has been used to strengthen the "distinguished student scholarship program." This program has permitted the school to attract superbly qualified students such as a Rhodes Scholar. Both programs help reduce the loan debt of medical stu-

continued on page 680

Auxiliary Message

continued from page 679

dents and help bring the most highly qualified young men and women to the study of medicine irrespective of their socioeconomic status.

The University of Missouri-Columbia, where Lester Bryant, M.D., serves as dean, has used some of the funds to increase the short-term student loan fund which provides interest-free loans to students who experience temporary financial difficulties. Also, they purchased new television monitors for classrooms, a computer assisted teaching program in pharmacology, and a heart sound simulator for use in the introduction to clinical medicine course. Another small portion of the funds was used to support the Midwest Student Research Forum.

St. Louis University Medical School, with Dr. William Stoneman, III as dean, has also used the funds for needed financial assistance to medical students. The money targeted for medical excellence has been helpful in a variety of projects. Several computer assisted teaching programs with videos and software were made available, three faculty members were able to attend a seminar in Toronto about evaluation of clinical competence and another faculty member attended a conference on microcomputers in education. These are a few of the projects that AMA-ERF money helped to implement.

All of the deans of Missouri's medical schools have expressed their appreciation and that of their faculty and students for the support which the schools have received from AMA-ERF. They hope that the use of the funds helps the medical association and the Auxiliary to find their efforts are worthwhile in enriching and improving the educational experience of our physicians-to-be.

The medical auxiliary has played a vital role in raising funds for AMA-ERF. Many counties in Missouri, as well as the state board, use the holiday sharing card to benefit AMA-ERF and 100% of the money is sent to the Foundation. Some also sell Christmas cards with about 40% of the profit going to AMA-ERF. A special, thoughtful way for medical society members to remember colleagues for professional courtesies, and other organizations or people for their support, is by sending "the value of your service cards", rather than other kinds of gifts. The entire donation from this gift goes to benefit AMA-ERF. Memorial cards are also available to mark the passing of a fellow physician, friend or family member stating that a donation has been made in memory of the deceased.

This article has been presented as part of an informational blitz to the medical community to help re-educate members and explain the importance of the AMA Education and Research Foundation to the new members of our association. All of our communities and families will benefit by being able to maintain the excellent health care available in our country.

Are You Up for an Adventure?

INTRAV and **MSMA** offer you the chance to see the world!

Take advantage of the traveling medical seminars offered by **INTRAV.** Offered to all Members, Families and Friends of the Missouri State Medical Association. See incredible sights and gain valuable medical information at the same time while traveling by boat, plane or train throughout the world! Trips available:

Wings Over the Nile — October 27 - November 9, 1989
Wings Over Kenya — Departs February 9, 1990
Thailand, Nepal and India — Departs March 24, 1990

For more information, write:
Missouri State Medical Association
ATTN: Mary Wiegers
P.O. Box 1028
Jefferson City, MO 65102
Or phone: 314/636-5151

Don't miss out — Call today!

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102

or, call her direct at 816/587-1125.

*Although your name will **not** be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Dear Dr. Woerth:

We are uncertain as to when we should be coding for consultations. Could you explain what insurance companies consider a consultation?

M.L. and J.S.

Dear M.L. and J.S.:

Yours is a timely question. In a study conducted by the Inspector General, Richard P. Kusserow, and published in June 1988, it was learned that 77% of Medicare claims for consultations were incorrectly coded. The study found that 53% of physicians were not familiar with the Medicare definition of a consultation (it is the same definition found in CPT-4).

A physician consultation includes services rendered by a physician whose opinion or advice is requested by a physician or other appropriate source for the further evaluation and/or management of the patient. When the consulting physician assumes responsibility for the continuing care of the patient, any subsequent service rendered by him will cease to be a consultation." (1989 CPT-4) It is important to note that a consultation is charged when the physician renders an opinion or advice *only*. If the consulting physician treats the patients then it is inappropriate to charge for a consultation. The physician should charge instead for the services he or she rendered.

Dear Dr. Woerth:

We have a great many patients who are slow at paying their medical bills. Have you any tips to encourage quicker payment?

L.R.

Dear L.R.:

Let me first recommend that your office staff develop a payment policy that all of you agree on and all of you enforce. Put this policy in writing and review it periodically at staff meetings. This will keep it fresh in everyone's minds and any necessary changes can be made.

To encourage timely payments by patients, I recommend to my clients that the first collection attempt be made at the time medical services are rendered. In a friendly manner inform the patient as to the cost of the day's services and any amount unpaid on their account. Ask the patient, "Would you like to pay that amount by check, cash or credit card (if applicable) today?" If the patient is not prepared to pay, give him/her a copy of the statement with the day's charges included and a self-addressed, stamped envelope. Then encourage the patient to send his/her payment at the earliest convenience. You now have made two attempts to collect payments and the patient understands that prompt payment is encourged.

On accounts that are 30, 60 or 90 days past due, I recommend that you hand-write or stamp a note on each statement encouraging prompt payment. These messages will be most noticeable if written in red. You can keep track of the effectiveness of these messages by inconspicuously marking the return envelope of these statements and noting when they are paid.

■

First hundreds...

Then thousands...

Soon more than a million.

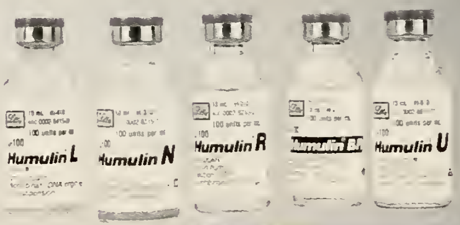
Soon more than a million insulin users will be taking Humulin.

And no wonder. Humulin is identical to the insulin produced by the human pancreas—except that it is made by rDNA technology.

Humulin is not derived from animal pancreases. So it contains none of the animal-source pancreatic impurities that may contribute to insulin allergies or immunogenicity.

The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.



DIET...EXERCISE...

Humulin®
human insulin
(recombinant DNA origin)

For your insulin-using patients

© 1987 ELI LILLY AND COMPANY HI-2907-B

Lilly Leadership
IN DIABETES CARE

Lilly

Eli Lilly and Company
Indianapolis, Indiana
46285

849313

Spending too much on liability coverage? Hold up this page and see the light.

Claims Paid Coverage is an unprecedented concept in medical liability insurance. Based on claims actually paid out, it can save you thousands of dollars in yearly premiums. And Claims Paid Coverage is available in the same coverage options as our Occurrence and Claims Made Policies.

For a free coverage evaluation, or more information, call today. Because when you need it, the right kind of liability coverage isn't expensive. It's priceless.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS

1111 SOUTH GLENSTONE SUITE 3-102, SPRINGFIELD, MO 65804
417 862-0650 (TOLL FREE) 1-800-422-5122

Save up to 46%
with Claims Paid
Coverage.

Initial Clinical Management of the HIV-infected Patient

William G. Powderly, M.D.
St. Louis, Missouri

For the primary care physician, treatment of HIV-infected patients often centers on the stage of illness at which the patient first seeks care. Disease staging, which uses symptoms in its classification scheme, thus leads to evaluation and selection of appropriate therapy. This is the second article in a series from the Washington University AIDS Clinical Trials Unit.

Clinical management of patients with HIV infection depends on the stage of illness at which they present. For patients with an AIDS-defining illness such as *Pneumocystis carinii* pneumonia or Kaposi's sarcoma, management generally consists of initiating antiretroviral therapy and avoiding further opportunistic infection using prophylactic anti-infective therapy. These issues will be dealt with in greater detail in future articles in this series.

This article will deal with patients who present earlier in the course of HIV infection. Such patients generally have few complaints and present to their primary care physician, having learned their antibody-positive status from community testing centers. For these patients, the most important evaluation is careful staging of their illness by history, examination and laboratory testing. In this way, the physician can assess to some degree the risk of progression to overt symptomatic disease, determine the need for interventional therapy and offer the patient a prognosis and a plan. Several different staging schemes have been published, but the most widely used are the Centers for Disease Control criteria (Table 1), which categorize patients according to symptoms and signs of disease.

The initial clinical assessment (Table 2) should be targeted towards HIV-related symptoms and signs. A history of weight loss, fevers and night sweats, diarrhea, shingles or new skin disease are all potentially significant. When examining a patient, careful attention should be paid to the skin, the lymphatic system and the oral cavity. Laboratory tests should be designed to evaluate the degree of immune impairment and to assess the risk of some of the associated infectious complications.

Skin disease is common in HIV-infected patients. Many patients complain of excessive dryness of the skin. Additional problems include seborrheic dermatitis with eczema, folliculitis, and psoriasis. AIDS patients are also prone to herpes simplex and herpes zoster infection, molluscum contagiosum, and drug eruptions. In addition, cutaneous Kaposi's sarcoma may be the first manifestation of AIDS and is characterized by blue-violet, palpable, non-pruritic, painless lesions.

Painless generalized lymphadenopathy is a common manifestation of HIV disease; it is not of prognostic significance and usually does not warrant further investigation or treatment. However, localized adenopathy or changes in previously noted enlarged nodes may be early signs of infection or malignancy, and should be investigated. Recurrent mucocutaneous candidiasis and oral aphthous ulcerations are common early manifestations of HIV infection, as is hairy leukoplakia, which is characterized by plaques of thickened mucosa on the tongue and elsewhere in the mouth. Both candidiasis and hairy leukoplakia indicate progressive immunodeficiency. The treatment of such complications will be

Table 1

CDC Classification for HIV Infection

Group 1.	Acute HIV infection (e.g. mononucleosis syndrome, aseptic meningitis)
Group 2.	Asymptomatic disease
Group 3.	Persistent generalized lymphadenopathy
Group 4.	Symptomatic HIV infection
Subgroup A.	Constitutional disease (AIDS-related complex)
Subgroup B.	Neurologic disease (dementia, neuropathies)
Subgroup C.	Secondary infectious disease (e.g. Pneumocystis pneumonia)
Subgroup D.	Secondary cancers (e.g. Kaposi's sarcoma)
Subgroup E.	Other conditions

Table 2

Initial Assessment of HIV-Positive Patient

Clinical:	History and physical examination (especially of skin, lymph nodes and oral cavity) Tuberculin skin test
Laboratory:	CBC with differential T lymphocyte count VDRL Toxoplasma and CMV serology p24 antigen (if available) Beta-2-microglobulin (if available)

outlined in future articles.

After a complete history and physical examination, laboratory data can give further information on the patient's status. Many infected individuals have isolated hematologic cytopenia, usually anemia or lymphopenia. Thrombocytopenia, usually immunologic in origin, is also seen. Abnormalities in liver function tests are also common, usually due to previous or concurrent viral hepatitis.

More specific laboratory information should also be obtained. The most helpful measurement is of T-lymphocyte subsets. Because the T4 (helper-inducer) lymphocyte is a specific target of HIV, measurement of the number of circulating T4 lymphocytes offers important information as to the degree of immune impairment and consequently the risk of developing AIDS. The normal T4 count ranges from 800-2000 cells/mm^3. A progressive loss of T4 cells over time is the normal pattern of HIV infection. The Multicenter Cohort AIDS study has shown that at least a third of patients with T4 lymphocyte counts less than 200 cells/mm^3 will develop *Pneumocystis carinii* pneumonia within three years, and the risk is considerably greater if the patients are also symptomatic. The risk of other AIDS-related opportunistic infections is similarly correlated with T4 counts. Consequently, current recommendations from the CDC include prophylaxis for *P. carinii* pneumonia for all HIV-infected patients with T4 counts less than 200 cells/mm^3. Possible prophylactic regments include trimethoprim-sulfamethoxazole, 1 or 2 DS tablets, or aerosolized pentamidine, 300 mg every four weeks. In addition, persons with T4 counts less than 500 cells/mm^3 should be treated with zidovudine. (Antiretroviral therapy will be the subject of a later article.)

It is important to realize that the T4 lymphocyte count, by itself, is not an absolute indicator of the risk of developing AIDS in an HIV-positive patient. Indeed, there are many asymptomatic HIV-infected persons with T4 counts less than 200 cells/mm^3. The rate of decline of T4 cells over time may also give important prognostic clues. Other markers of disease activity are under study, but should at present be considered research tools. The most promising are p24 antigen and beta-2-microglobulin. The p24 antigen is the viral core protein. The presence of p24 antigenemia appears to indicate viral activation and may indicate a poorer prognosis. Beta-2-microglobulin is a protein whose serum levels correlate to some degree with lymphocyte activation. High levels of beta-2-microglobulin in asymptomatic patients have been associated with a greater risk of progression to symptomatic disease and AIDS. The possible indicators of risk of progression of HIV disease are summarized in Table 3.

An additional important aspect of the routine clinical care of the HIV-positive patient involves health maintenance. Because most HIV-infected individuals will develop progressive immunodeficiency, they should be assessed for occult infections. Tuberculin skin testing and chest x-ray should be done to rule out occult tuberculosis, and individuals who test positive should receive isoniazid prophylaxis. Serologic testing for syphilis will indicate infected individuals who may

Table 3

Factors Indicating Progressive HIV Infection

Clinical:	Unexplained weight loss (10% of body weight in 6 months)
	Fevers +/- night sweats persisting for 1 month
	Unexplained diarrhea persisting for 30 days
	Recurrent oral candidiasis
	Multidermatomal herpes zoster
	Oral hairy leukoplakia
Laboratory:	Anemia
	Elevated ESR
	Decreased T4 lymphocytes
	p24 antigenemia
	Elevated beta-2-microglobulin

require more intensive antitreponemal therapy, particularly if there is any suspicion of neurosyphilis. Baseline CMV and toxoplasma antibody testing is not of immediate therapeutic benefit but does identify those persons at risk for reactivation disease later in its course. HIV-positive individuals are also candidates for vaccination against pneumococcal disease ("Pneumovax") and for annual immunizations against influenza.

Finally, but no less importantly, management of the HIV-infected patient involves support and education. With improved antiretroviral therapy, better survival from opportunistic infection and use of prophylactic antimicrobial therapy, HIV infection is becoming a chronic disease. Physicians need to be prepared to deal with the many somatic complaints that develop and distinguish them from complaints that herald an important complication. Patients need support as they deal with the psychological effects of this disease. They also need education about symptoms that should alert them to seek prompt medical attention, such as changes in fever pattern or the new onset of cough or headache. Patients should be educated about transmission so new cases can be prevented. In addition, the physician needs to help the patient cope with the changing social dimensions of his disease. Confidentiality and maintenance of employment and insurance benefits are prime concerns for the asymptomatic HIV patient. As the disease progresses, disability and Social Security benefits become more important. Most patients with AIDS wish to be treated as much as possible at home, with family and friends. Support for the families of patients with HIV disease is also important. Primary care physicians play a vital role in facilitating management in a cost-effective and humane manner, not only by providing direct patient care, but also by coordinating the roles of other consultant physicians, social workers, home-care nurses, dietitians, and other professionals.

Additional Reading

Centers for Disease Control: Guidelines for prophylaxis against *Pneumocystis carinii* pneumonia for persons infected with human immunodeficiency virus. *MMWR* 1989;38(supp 5):1-8.

Friedland G: Clinical treatment: Overview. *AIDS.* 1988;2(supp 1):S133-S136.

Hollander H: Work-up of the HIV-infected patient: Practical approach. *Infect Dis Clin N Amer* 1988;2:353-358.

Moss AR: Predicting who will progress to AIDS. *Brit Med J* 1988;297:1067-1068.

Polk BF, Fox R, Brookmeyer R, et al: Predictors of the Acquired Immunodeficiency syndrome developing in a cohort of seropositive homosexual men. *NEJM* 1987;316:61-66.

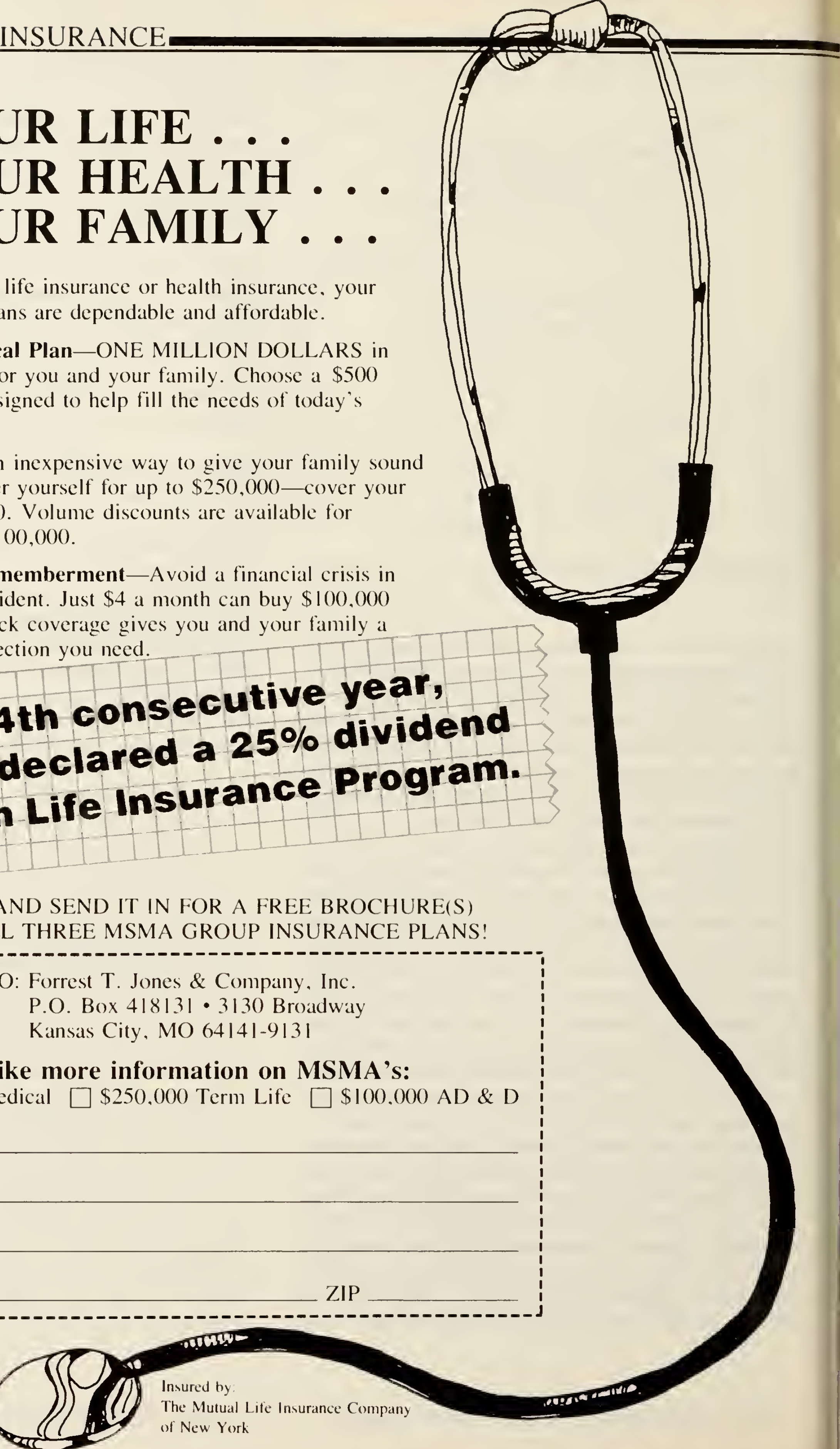
The Author

WILLIAM G. POWDERLY, M.D.

Dr. Powderly is from the Washington University, St. Louis, AIDS Clinical Trials Unit.

Supported by PHS grant AI-25903.

Reprints not available



MSMA GROUP INSURANCE

FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $500 or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S) ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:

☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ____________________

ADDRESS ____________________

CITY ____________________

STATE ____________________ ZIP __________

Administered by:
Forrest T. Jones & Company, Inc.
P O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

Insured by:
The Mutual Life Insurance Company
of New York

Acute Leukemia After Adjuvant Chemotherapy for Breast Cancer

Nashat Y. Gabrail, M.D., MRCP
St. Louis, Missouri

Alkalating chemotherapeutic agents are frequently implicated in the development of acute non-lymphocytic leukemia. A case report illustrates the danger of administering a prolonged course of adjuvant chemotherapy with Melphalan following mastectomy for breast cancer.

Acute leukemia is a well-recognized complication of alkalating agent chemotherapy for solid tumor. I report a case of secondary acute non-lymphocytic leukemia (ANLL) in a patient who was treated with Melphalan adjuvant chemotherapy for eight years. This is apparently the first case report of ANLL due to Melphalan used as adjuvant therapy for breast cancer.

Case Report

A 49-year-old woman developed invasive intraductal carcinoma with axillary lymph node involvement at age 38. She underwent a modified radical mastectomy, followed by 4500 rads local radiation therapy and a regimen of Melphalan, 6 mg orally daily in seven day cycles, repeated every six weeks. She received a total of 2900 mg of Melphalan over an eight-year period.

In June 1984, eight years after the mastectomy, Melphalan therapy was stopped because of prolonged marrow suppression. Bone marrow aspirate and biopsy findings were reportedly normal. In July 1985, she developed cellulitis in her right arm. A bone marrow examination showed pre-leukemia, which became acute leukemia in December 1985.

The patient was referred to Ellis Fischel State Cancer Center for further evaluation and treatment. Acute myelomonocytic leukemia was confirmed, and chemotherapy was started, consisting of Adriamycin 25 mg/M^2 intravenously on days 1, 2, and 3, and ARa-C 100 mg/M^2 intravenous infusion over 24 hours for seven days. The ANLL converted back to a smoldering leukemia with persistent leukopenia and thrombocytopenia. In September 1986, the patient developed severe myalgia. A bone marrow examination confirmed relapse of ANLL. Cytogenetic studies revealed deletion of the long arm of chromosome 7, a finding consistent with drug-induced leukemia. The patient died of bacterial and fungal sepsis during reinduction chemotherapy.

Discussion

Alkalating agent-induced ANLL is a well-recognized complication of the treatment of various tumors.[1-6] The number of reported cases has increased dramatically over the last 10 years. About 50% of the cases present initially as myelodysplastic syndrome.[7] Half of these transform to ANLL; the other half lead to death from complications of bone marrow failure (neutropenia and thrombocytopenia). The leukemia and its pre-leukemic state are usually refractory to chemotherapy. Remission, achieved in less than 30% of cases, is usually short-lived.[5,7] This is compared with the 65%-70% remission rate achieved in de novo ANLL.

The disease usually develops in patients who have potentially curable diseases, such as Hodgkin's disease, non-Hodgkin's lymphoma, or cancers, such as multiple myeloma and ovarian cancer, that have prolonged, protracted courses requiring combined therapy.[2,4,5,6] The risk varies from 17% over 50 months in multiple myeloma, to 10% over nine years in Hodgkin's disease.[5] The causative agent is usually one of the commonly used alkalating agents – Melphalan, Busulfan, Chlorambucil and Cyclophosphamide.[5] The risk is dose-related. The risk for Melphalan starts when the total dose exceeds 800 mg. Acute leukemia usually develops several months to years after starting chemotherapy. The risk continues long after the discontinuation of the alkalating agent.

The risk of ANLL complicating adjuvant therapy of breast cancer is much lower than other tumors – 1.6% over 10 year periods – and the drugs incriminated include L-Pam, Chlorambucil and Cytoxan.[8] The role of radiation therapy in inducing ANLL is not yet clear.[8,9] It has been suggested that the patient with breast cancer has an inherent susceptibility to developing ANLL, but Fisher et al, in their analysis of 8,483 patients enrolled in the NSABP, did not observe an increased incidence of ANLL in breast cancer patients.[8]

The comparatively low incidence of secondary ANLL in breast cancer is many-factored. First, Cyclophosphamide, the most commonly used alkalating agent in adjuvant therapy, is the least leukemogenic one.[5] Also, adjuvant chemotherapy is classically given for short periods of time and, hence, a lower cumulative dose results.[8] In fact, many reports have failed to demonstrate an increased chance of ANLL following adjuvant chemotherapy.[9]

The pathogenesis of secondary ANLL is not clear, but a possible mechanism is specific DNA damage to marrow cells. Trainon et al, have shown that Melphalan and Chlorambucil cause persistent morphologic changes in mouse bone marrow, whereas the less leukemogenic alkalator Cyclophosphamide does not.[10] Cadman et al suggested that prolonged immunosuppression caused by alkalating agents leads to the development of ANLL.[4] Activation of dormant leukemogenic virus is another possibility.[2]

There is no doubt that the benefit of adjuvant chemotherapy for breast cancer outweighs the risk of developing secondary ANLL. However, the inappropriate use of a treatment of unproven efficacy for an unnecessarily prolonged period of time is probably harmful to some patients and should be avoided.

References

1. Rosner R, Zarrabi M: Breast cancer and acute leukemia. *Am J Hemat* 1978;4:151-172.
2. Einhorn N: Acute leukemia after chemotherapy (melphalan). *Cancer* 1978;41:444-447.
3. Grunwald H, Rosner F: Acute myeloid leukemia following treatment of Hodgkin's disease. *Cancer* 1982;50:676-683.
4. Cadman EC, Bertino JR: Acute non-lymphocytic leukemia. *Cancer* 1977;40:1280-1296.
5. Pedersen-Bjergaard J, Nissen NL: Acute non-lymphocytic leukemia, pre-leukemic and acute myeloproliferative syndrome secondary to treatment of other malignant diseases. *Cancer* 1984;54:452-462.
6. Greene MH, Dembo AJ: Acute non-lymphocytic leukemia after therapy with alkalating agents for ovarian cancer. *NEJM* 1982;307:1416-1421.
7. Kantarjian H, Freireich EJ: Therapy-related leukemia and myelodysplastic syndrome. Clinical, cytogenetic and prognostic features. *J Clin Oncol* 1988;4:1748-1757.
8. Fisher B, Brown A: Leukemia in breast cancer patients following adjuvant chemotherapy or post-operative radiation. The NSABP experience. *J Clin Oncol* 1985;3:1640-1658.
9. Haas JF, Day NE: Risk of leukemia in ovarian tumor and breast cancer patients following treatment by cyclophosphamide. *Br J Cancer* 1987;55:213-218.
10. Trainor KJ, Morley AA: Residual marrow injury following cytotoxic drugs. *Leukemia Research* 1979;3:205-210.

The Author

NASHAT Y. GABRAIL, M.D., MRCP

Dr. Gabrail is currently an assistant professor of medicine at St. Louis University Medical Center.

Reprints

Nashat Y. Gabrail, M.D., MRCP
Veterans Administration Hospital
St. Louis, Missouri 63125

Human Ehrlichiosis

Farrin A. Manian, M.D., John Weidner, M.D. and John Costello, M.D.

St. Louis, Missouri

Daniel B. Fishbein, M.D. and Jacqueline E. Dawson, M.S.

Atlanta, Georgia

Ehrlichiosis is one of the latest tick-borne illnesses to be reported in humans. The authors describe two cases of this rickettsial disease that were apparently acquired in Missouri. They discuss diagnosis and treatment.

Ehrlichia canis is a tick-borne rickettsia that causes a serious and potentially fatal disease in dogs.[1] Human ehrlichiosis is a newly described illness due to *E. canis* or a closely related rickettsia; the disease has been most commonly reported from Southern states.[2] In 1987, Fishbein et al[3] reported a case of human ehrlichiosis in a patient whose state of residence was Missouri. The state where tick exposure had occurred was unknown. We present two cases of human ehrlichiosis that appear to have been acquired by exposure to ticks in Missouri. The first patient had a rather severe infection characterized by multiple laboratory abnormalities including cerebrospinal fluid (CSF) pleocytosis, disseminated intravascular coagulation (DIC), and persistent extraordinarily high antibody levels against *E. canis*. In contrast, the second patient had a relatively mild disease with less striking laboratory abnormalities. Both patients fully recovered following appropriate antibiotic therapy.

Case Reports

Patient No. 1

A 57-year-old male veterinarian from central Missouri was admitted to St. John's Mercy Medical Center, St. Louis, on July 5, 1987, with a three-week history of fever, headache, myalgia, depression and intermittent confusion. Four days prior to the onset of his illness, he had removed an embedded tick from his left calf. He was a large-animal surgeon with extensive occupational exposure to horses, cattle and swine, but not dogs. He had a cat and a dog at home, both of which were apparently healthy. He had no history of recent travel outside Missouri. His medical history was significant for insulin-dependent diabetes mellitus, hypertension, and ulcerative colitis treated intermittently with prednisone (last course of therapy completed one week prior to the onset of the current illness). He also had had bilateral hip replacement and received several blood transfusions in 1984.

Admission examination revealed a confused middle-aged man, apparently in a toxic state, with a temperature of 103.4°F orally, pulse 96 beats/min, respiratory rate 20/min, and blood pressure 130/82 mm Hg. Scattered petechiae were noted over his lower extremities below the knees, with no rash on palms or soles. A small ecchymotic and indurated area was noted around the site of the previous tick bite on the left calf. There

Table 1

Hematologic and coagulation studies of Patient No. 1 during his hospitalization

Hospital Day	Hemoglobin (gm/dL)	WBC (K/mL)	WBC Differential*	Platelets (K/mL)	PT (sec)	PTT (sec)	Fibrinogen (mg/dL)	FDP (μg/mL)
1	11.3	2.3	58S, 16B, 14L, 8M, 4AL	25	13.6	48.4	ND	ND
2	10.6	2.5	44S, 34B, 18L, 4M	14	13.8	49.1	110	>40
4	9.4	6.1	39S, 4B, 37L, 2M, 18AL	28	12.7	36.6	72	ND
7	9.0	9.2	51S, 3B, 40L, 5M, 1E	84	11.4	26.1	220	ND
9	8.7	8.2	35S, 48L, 12M, 2E, 1AL 1MT, 1MY	272	12.0	28.2	195	ND

*S – segmented neutrophil; B – band neutrophil; L – lymphocyte; M – monocytes; AL – atypical lymphocyte; E – eosinophil; MT – metamyelocyte; MY – myelocyte

ND – not done

Normal values: PT 10.7-12.9 sec; PTT 21-31.8 sec; Fibrinogen 200-400 mg/dL; FDP < 10 μg/mL.

was bilateral periorbital edema with conjunctival injection. The rest of his examination was unremarkable. The patient's hematological and coagulation evaluation at the time of admission is summarized in Table 1. Findings were consistent with pancytopenia and DIC. Laboratory tests showed sodium of 125 meq/L, BUN 22 mg/dL, creatinine 1.2 mg/dL, and glucose 41 mg/dL. Liver enzyme tests disclosed a serum aspartate aminotransferase (SGOT) of 560 U/L (normal, 8-40 U/L), alkaline phosphatase 227 U/L (normal, 30-135 U/L), and lactic dehydrogenase (LDH) 1063 U/L (normal, 100-225 U/L). Fractionation of LDH showed elevation of all isoenzymes; this was interpreted to be consistent with "lymphoma." Serum creatine phosphokinase (CPK) was also elevated, measuring 2130 U/L (normal, 30-225 U/L) but urine myoglobin screen was negative. Serum albumin was 3.4 g/dL with a total protein of 5.5 g/dL. Urinalysis showed 3+ occult blood, 2-5 RBCs per high power field, few WBCs per high power field, and 5-10 granular coarse casts.

The chest radiograph showed no infiltrates. Computed tomogram of the head was normal. Lumbar puncture revealed 13 WBCs - 50% lymphocytes and 50% monocytes - with no RBCs. The CSF glucose was measured at 36 mg/dL (concomitant blood glucose was also 36 mg/dL); protein was 39 mg/dL and gram stain showed no organisms. Results of tests for CSF cryptococcal antigen and VDRL were also negative.

The primary diagnostic consideration at the time of admission was a tick-related infection, such as Rocky Mountain spotted fever (RMSF) or tularemia. The patient was initially administered ampicillin, gentamicin and chloramphenicol at 1 g intravenously every six hours. Bacterial cultures of blood, CSF and urine were sterile. Within 48 hours of initiation of therapy, the patient became afebrile and much more alert. Cytologic tests of CSF taken at the time of admission were interpreted as "histiocytic lymphoma." Due to the patient's pancytopenia and the possibility of malignancy, a bone marrow examination was performed; this showed megakaryocytic and granulocytic hyperplasia. The erythroid precursors were within normal limits and there was no evidence of malignancy. Special stains for acid fast bacilli and fungi were negative. Tests for human immunodeficiency virus (HIV) by enzyme immunoassay (EIA), and hepatitis B virus were also non-reactive.

After four days of therapy, the patient's clinical status improved remarkably, with resolution of fever and confusion. At that time, ampicillin and chloramphenicol were discontinued, and a regimen of doxycycline 100 mg orally twice a day was begun. Gentamicin was continued due to the possibility of severe tularemia. Other laboratory examinations showed Proteus OX-2, OX-K, and OX-19 antibody titers of 1:40, 1:20, 1:40, respectively. A screen for cytomegalovirus (CMV) IgM and IgG by immunofluorescent antibody (IFA) testing gave

Table 2

Ehrlichia canis antibody titers of Patient No. 1 by immunofluorescent assay.

Date of Sample	Antibody Titer
7/10/87	1:10,240
9/2/87	1:10,240
11/20/87	1:20,480 (≥1:20,480)*
5/24/88	1:20,480 (1:5120)*
10/23/88	≥1:20,480*

* Tests performed by CDC; all others performed by University of Illinois-Urbana College of Veterinary Medicine.

results of 1:32 and 1:256, respectively. Blood, urine and CSF viral cultures for CMV failed to grow. A test for Epstein-Barr virus (EBV) IgM was negative, and for IgG was 1:160. Rocky Mountain spotted fever titers by IFA and EIA were negative. Brucella and tularemia titers were negative and 1:20, respectively.

After seven days' treatment with doxycycline and 10 days' treatment with gentamicin, the patient's clinical status had returned to baseline. His thrombocytopenia improved and DIC resolved (Table 1). By the ninth hospital day, his platelet count was normal. A repeat lumbar puncture showed 14 WBCs, 90% lymphocytes and 10% monocytes, with unremarkable protein and glucose levels. Repeat CSF cytological examination revealed no abnormalities. The LDH and SGOT also returned to near normal levels. The patient was discharged on the 12th hospital day with the diagnosis of tick-related illness of undetermined cause. The diagnosis of human ehrlichiosis was later entertained when convalescent titers for RMSF and tularemia drawn three weeks after discharge remained negative. The results of *E. canis* serological measurements taken over time by IFA are shown in Table 2. It should be noted that the first serum specimen was drawn during the fourth week of the patient's illness. Extremely high titers were documented at each measurement. Attempts at isolating *E. canis* from the patient's blood six weeks after therapy were unsuccessful. Due to persistently high titers four months after apparent recovery from his illness, the possibility of chronic ehrlichiosis, similar to the disease in canines, was considered. Even though he was asymptomatic, the patient was treated with four weeks of oral tetracycline at 500 mg four times a day. As shown in Table 2, serum sent to the Centers for Disease Control (CDC) showed a fourfold or greater drop in antibody titers drawn 10 months following discharge from the hospital, thus meeting the CDC serological case definition of ehrlichiosis.[2] Serological evaluation by another laboratory showed persistently elevated titers without a significant drop. Corresponding titers of *Rickettsia typhi* and *Coxiella burnetti* remained insignificant. At the patient's request, a *Borrelia burgdorferi* (agent of Lyme disease) antibody test by EIA was performed by a private laboratory on sera drawn one month and three months after his illness; these were both "strongly positive" (standard deviation (SD) > 7) at one month, and "positive" (SD 5.0-7.0) at three months. Repeat EIA Lyme antibody testing by the CDC at four months was negative. At 18 months following his initial illness, the patient has remained well without further therapy.

Patient No. 2

A 51-year-old construction worker was admitted to St. John's Mercy Medical Center, St. Louis, on July 16, 1988, for evaluation of headache and fever. He had been in his usual state of good health until four days prior to admission when he began to experience lightheadedness and dizziness followed by severe retroorbital headaches, myalgia, arthralgia, rigors, and temperature elevation up to 104°F. He was treated with oral ampicillin for two days without significant improvement. Ten days prior to the onset of his illness, while vacationing in southern Missouri, he suffered a tick bite on his right shin. The tick was removed without difficulty. He also removed several ticks from his apparently healthy dog. He denied any other travels outside of Missouri during the previous six months. Admission physical examination was significant for a temperature of 102.2°F orally with a pulse of 84 beats/min, respiratory rate 20/min, and blood pressure of 130/70 mm Hg. Skin examination revealed a small scab with minimal associated erythema on the right shin, at the site of the previous tick bite. The rest of his examination was unremarkable. Admission laboratory examination showed a WBC of 3100/mL with 48% segmented neutrophils, 24% bands, 21% lymphocytes, and 7% monocytes. Hemoglobin was 16 g/mL and platelet estimate was slightly decreased. The SGOT was 156 U/L and LDH was 452 U/L. Serum electrolyte, creatinine, CPK, bilirubin, alkaline phosphatase, albumin, PT, and PTT values were all within normal range. Urinalysis was significant for 10-25 RBCs. The chest radiograph was normal.

A tick-related illness was suspected and a regimen of 500 mg of oral tetracycline, four times a day, was initiated soon after admission. Blood and urine cultures had no growth. Acute Weil-Felix titers, RMSF, tularemia and *E. canis* titers were all negative. Within 48 hours of initiation of tetracycline therapy, the patient became afebrile and his headache and other symptoms improved dramatically. Three days following admission his WBC count had increased to 5300/mL, with a differential of 23% segmented neutrophils, 62% lymphocytes, 8% monocytes, 2% eosinophils, 2% basophils, and 3% atypical lymphocytes. He was discharged on the fourth hospital day and treated with a two-week course of oral tetracycline. Full recovery ensued. A convalescent *E. canis* serum titer by IFA drawn two weeks after the acute titer was positive at 1:5120 dilution. Rocky Mountain spotted fever and tularemia antibody titers remained negative. At six months' follow-up, the patient has remained well.

Discussion

Ehrlichia canis is a rickettsia which until recently was thought to cause infections strictly in dogs and other Canidae. Canine ehrlichiosis has been described in many parts of the world, including the United States.[1,4] Serological evidence of *E. canis* infection has been reported among dogs in at least 34 states, including Missouri.[1,2] The brown dog tick, *Rhipicephalus sanguineus*, is the main vector and reservoir for transmission of ehrlichiosis among dogs. The acute phase of ehrlichiosis in dogs is characterized by fever, anorexia, decreased stamina and weight loss.[1] Thrombocytopenia, leukopenia, and anemia are common laboratory features. Most dogs survive the acute phase of the disease, which typically lasts four to six weeks. If left untreated, some species of dogs will develop a chronic infection, which may be mild or severe and, frequently, fatal. The most reliable laboratory test for diagnosis of *E. canis* infection in dogs is the IFA.[1] It has been demonstrated experimentally that antibody to *E. canis* develops usually within three weeks after infection.[5] Persistently elevated antibody titers in dogs suggest chronic infection.[4,5]

Human infection with *E. canis* was first documented by Maeda et al in 1986,[6] in a patient who apparently acquired the infection from tick bites while planting trees in rural Arkansas. Subsequently, several other cases, including two in children, have been reported.[3,7,8,9] The CDC has recently summarized the epidemiologic, clinical and laboratory features of human ehrlichiosis in published and unpublished cases as of May 1988.[2] Seventy-four percent of patients were male and the majority were between the ages of 30 to 60 years (range of 2 to 68 years). Southeastern and South Central areas of the United States account for most of the cases. The majority of patients were exposed to ticks one to three weeks prior to the onset of illness, which occurred between March and October. Symptoms of ehrlichiosis are nonspecific and quite similar to those reported by patients with RMSF. Most patients have fever, headache, anorexia, myalgia, chills, rigors, nausea, vomiting and weight loss. Rash has been reported in only 20% of patients. Petechial rash, present in Patient No. 1, has been previously reported in only one other patient.[8] A macular, blanching rash has also been reported in a few cases. Relative bradycardia with fever, present in both of our cases, and the mental status changes we found in Patient No. 1 have also been previously noted.[3,6,7] Leukopenia, thrombocytopenia, and abnormal liver findings, including elevated SGOT, SGPT, and alkaline phosphatase levels, have been found in 50% or more cases.[2] Anemia is less common. Elevated CPK, as documented in Patient No. 1, and the hematuria found in both of our patients have also been reported previously.[6,7]

Other laboratory abnormalities found in Case No. 1 are worthy of further discussion. The "histiocytic lymphoma cells" in the CSF most likely represented reactive and atypical lymphocytes rather than true lymphoma cells for several reasons. For instance, the patient had atypical lymphocytes in the peripheral blood early during his hospitalization; repeat CSF cytological examination failed to show any abnormal cells; his clinical status improved dramatically within 48 hours of initiating therapy; he has remained asymptomatic for over a year without any evidence of malignancy; and the patient's serum LDH isoenzyme levels, initially suggestive of malignancy, became nearly normal one week following antibiotic therapy. Instead of having a malignancy, the patient had a "pseudolymphoma," probably as a result of lymphocyte activation by the rickettsial infection. Indeed, in dogs *E. canis* has been shown to stimulate both T and B lymphocyte dependent areas of lymph nodes.[10] Such lymphocyte stimulation probably accounts for the presence of IgM antibodies to CMV and *B. burgdorferi*. False positive reactions to tests for IgM against CMV and *B. burgdorferi* have been reported with EBV infection,[11,12] and it is possible that this phenomenon also occurs with *E. canis* infection. The patient's rapid clinical response to antibiotics and negative CMV cultures make acute CMV infection unlikely. Similarly, lack of a history of travel to endemic areas for Lyme disease, absence of the typical rash of this infection (erythema migrans), and the presence of DIC and pancytopenia do not support the diagnosis of Lyme disease.

The bone marrow examination of this patient was also of interest. In contrast to the findings of Pearce et al,[13] we found no evidence of hypoplasia of myeloid precursors. Instead, megakaryocytic and granulocytic hyperplasia with normal erythroid precursors were found. These findings suggest that, at least in some cases of human ehrlichiosis, thrombocytopenia and granulocytopenia are due to peripheral sequestration or destruction of cells rather than marrow suppression.

Perhaps the most intriguing laboratory finding of Patient No. 1 is the persistence of extremely high antibody levels against *E. canis* at titers not previously reported in humans. Such high antibody titers may represent an exaggerated response to *E. canis* due to the prolonged nature of the patient's illness and his delay in seeking medical care (three weeks). Alternatively, it may suggest previous *E. canis* infection in the past (symptomatic or asymptomatic) or possibly a chronic, active form of infection similar to the disease that occurs in dogs. His complete recovery and normalization of laboratory findings following therapy, however, militate against the latter possibility.

In contrast with Patient No. 1, Patient No. 2 had a mild illness, possibly related to his earlier treatment. Of interest, subclinical ehrlichiosis has also been reported,[7] further expanding the spectrum of this disease.

The cause of human ehrlichiosis is thought to be *E. canis*, or a closely related organism, although to date this organism has not been cultured from humans. Preliminary data suggest a tick-borne route of transmission to humans. In contrast to canine ehrlichiosis, however, the brown dog tick, *Rhipicephalus sanguineus* (which is found in Missouri), may not be the main vector or reservoir involved in human transmission because it rarely bites humans.[2] The diagnosis of human ehrlichiosis is made when a fourfold or greater increase or decrease in antibody titer by IFA against *E. canis* with a minimum titer of 1:80 is observed.[2] This test is available at the CDC through the state health department. Currently, only paired sera (preferably acute and convalescent samples drawn 2 to 4 weeks apart) are accepted. As of December 1988, five additional cases of human ehrlichiosis meeting the above serological criteria had been reported to the CDC from Missouri; one case was fatal (CDC, unpublished data).

The antibiotic of choice for canine ehrlichiosis is tetracycline. Although definitive studies have not yet been published, the drug also appears to be effective against human ehrlichiosis. We observed the apparent clinical and laboratory response of one of our patients to chloramphenicol; a similar response has been reported in another case of human ehrlichiosis.[8] These observations suggest that chloramphenicol may also have a role in the treatment of this disease. Currently, however, insufficient data exist to recommend chloramphenicol as an alternative antibiotic.[2]

Human ehrlichiosis should be added to the list of infections associated with tick bites in Missouri. Physicians should consider this diagnosis when a patient with a history of tick exposure develops symptoms suggestive of RMSF, but without the typical rash. As with RMSF, early diagnosis and therapy may be key to a successful outcome.

References

1. Pyle RL: Canine ehrlichiosis. *J Am Vet Med Assoc* 1980;177:1197-1199.
2. Centers for Disease Control: Human ehrlichiosis - United States. *MMWR* 1988;37:270,275-277.
3. Fishbein DB, Sawyer LA, Holland CJ, et al: Unexplained febrile illness after exposure to ticks. *JAMA* 1987;257:3100-3104.
4. Keefe TJ, Holland CJ, Salyer PE, et al: Distribution of *Ehrlichia canis* among military working dogs in the world and selected civilian dogs in the United States. *J Am Vet Med Assoc* 1982;181:236-238.
5. Buhles WC, Huxsoll DL, Ristic M: Tropical canine pancytopenia: Clinical, hematologic, and serologic response of dogs to *Ehrlichia canis* infection, tetracycline therapy and challenge inoculation. *J Infect Dis* 1974;130:357-367.
6. Maeda K, Markowitz N, Hawley RC, et al: Human infection with *Ehrlichia canis*, a leukocytic rickettsia. *N Engl J Med* 1987;316:853-856.
7. Taylor JP, Betz TG, Fishbein DB, et al: Serological evidence of possible human infection with *Ehrlichia* in Texas. *J Infect Dis* 1988;158:217-220.
8. Edwards MS, Jones JE, Leass DL, et al: Childhood infection caused by *Ehrlichia canis* or a closely related organism. *Pediatr Infect Dis J* 1988;7:651-654.
9. Rohrbach BW, Harkess JR, Ewing SA, et al: Human ehrlichiosis, Oklahoma (abstract 1278), in *Program and Abstracts of the 27th Interscience Conference on Antimicrobial Agents and Chemotherapy*. New York, American Society for Microbiology, 1987.
10. Reardon MJ, Pierce KR: Acute experimental canine ehrlichiosis; I: Sequential reaction of the hemic and lymphoreticular systems. *Vet Pathol* 1981;18:48-61.
11. Horwitz CA, Henle W, Henle G, et al: Clinical and laboratory evaluation of cytomegalovirus-induced mononucleosis in previously healthy individuals. *Medicine* 1986;65:124-134.
12. Steere AC, Grodzicki RL, Kornblatt AN, et al: The spirochetal etiology of Lyme disease. *N Engl J Med* 1983;308:733-740.
13. Pearce CJ, Conrad ME, Nolan PE, et al: Ehrlichiosis: A cause of bone marrow hypoplasia in humans. *Am J Hematol* 1988;28:53-55.

The Authors

FARRIN A. MANIAN, M.D.
JOHN WEIDNER, M.D.
JOHN COSTELLO, M.D.
DANIEL B. FISHBEIN, M.D.
JACQUELINE E. DAWSON, M.S.

Dr. Manian is Chief of the Division of Infectious Diseases at St. John's Mercy Medical Center in St. Louis, Missouri where Drs. Weidner and Costello are internists. Dr. Fishbein and Ms. Dawson are with the Division of Viral and Rickettsial Diseases at the Centers for Disease Control in Atlanta, Georgia.

Reprints

Farrin A. Manian, M.D.
Chief, Division of Infectious Diseases
621 South New Ballas Road, Suite 3016
St. Louis, MO 63141

Late Occurrence of Aortoenteric Fistula

After Removal of a Prosthetic Graft

Alfred D. Harding, M.D. and W. Kirt Nichols, M.D.

Columbia, Missouri

Aortoenteric fistula is an uncommon but devastating complication of aortic surgery. The authors present a case of aortoenteric fistula occurring several years after resection of an aortic prosthesis that had not previously been involved in fistula formation. The pathophysiology and clinical evaluation of aortoenteric graft fistula are discussed.

Aortoenteric fistula, a devastating complication of aortic surgery, has a reported incidence of 0.36% to 1.6%.[1-3] Operative mortality is frequently higher than 70%,[1,3,7] although some studies have reported somewhat better survival.[6,9] Most cases of aortoenteric fistula are secondary to prosthetic graft implantation, but at least two cases have been reported after aortoiliac endarterectomy without placement of any prosthetic material.[4,5] The case we report here illustrates that the patient remains at risk for aortoenteric fistula long after aortic surgery, even in the absence of a prosthesis. Recurrent fistula is a well-known complication of aortoenteric fistula repair.[6-8] However, we have found only one other case in which an aortoenteric fistula occurred after excision of a prosthetic graft that was not previously involved in a graft-enteric fistula.[9]

Case Report

A 61-year-old man complained of left leg pain and fainting spells. He reported several episodes of melena over the previous month. His left leg had an ankle-to-brachial index of 0.33 and changes of chronic atherosclerotic disease. He also had guaiac-positive stool and severe anemia with a hematocrit of 21.9%.

The patient had a long history of atherosclerotic peripheral vascular disease. He had undergone aortofemoral bypass with an end-to-side proximal anastomosis ("piggy-back") nine years previously. This graft had been excised six years previously due to infection. No other reconstruction was done at that time, and a below-knee amputation was required on the right side due to ischemia. These operations were all performed at another institution.

Following blood transfusions, the patient's symptoms resolved. Colonoscopy revealed several diverticula, but no obvious bleeding source. Esophagogastroduodenoscopy revealed normal findings. The patient was observed for several days in the hospital, then discharged. In a follow-up examination three weeks later, he was found again to have anemia (hematocrit of 31%) and he gave a history of recurrent melena. On this occasion, esophagogastroduodenoscopy revealed a small duodenal ulcer and mild diffuse gastritis. He was treated with cimetidine. He returned approximately one week later complaining of dizzy spells and was found to have a further decreased hematocrit of 26%. While hospitalized, the patient had a bleeding episode with melena and hypotension. An arteriogram revealed mild angiodysplasia in the right colon and a 1.5 cm saccular pseudoaneurysm on the anterolateral aspect of the infrarenal aorta (Fig 1). Due to the presence of the pseudoaneurysm and negative findings on colonoscopy, an aortoenteric fistula was suspected. At operation, a fistula was identified between the aorta and the proximal ileum. The bowel was sutured primarily and the aorta was repaired with a vein patch. The aorta was carefully covered with peritoneum. The patient recovered uneventfully and was well after six months.

Discussion

The first report of aortic graft-enteric fistula following aortic reconstruction with a homograft is credited to Brock by DeWeese and Fry.[10] Subsequently, Clayton[11] described the first graft-enteric fistula associated with a synthetic prosthesis. Since that time, numerous cases have been reported,[12] all but two associated with a prosthesis.[4,5] Aortoenteric fistulas have been reported two days to 14 years after aortic surgery.[2]

Early theories on the pathogenesis of aortic graft-enteric fistula included mechanical erosion or pressure necrosis of the bowel wall,[10,13] suture failure,[14] and failure of the vascular wall.[7] Some experimental data, however, suggests that infection plays a prominent role.[15] In our case, a low-grade, subclinical infection related to the previous graft infection may have been present, causing failure of the aortic repair. As in many cases associated with a prosthesis,[16] this fistula communicated through a pseudoaneurysm.

Angiography rarely demonstrates extravasation of contrast through a fistula, but is helpful if a pseudoaneurysm or other irregularity of the vascular anastomosis can be identified.[16,17] Occasionally, endoscopy produces striking findings, such as visualization of a vascular graft through the fistula,[13] but results have been variable and endoscopy cannot be used to exclude the diagnosis of aortoenteric fistula.[16] Barium studies are usually not helpful.[1] One series reported a mean duration of bleeding of 25 days before the diagnosis was made,[3] underscoring the difficulty in establishing the diagnosis in some patients.

The case presented here illustrates a long latency between aortic surgery and the appearance of an aortoenteric fistula. The mean latency in one study was 51 months.[15] This case further serves as a reminder that the patient remains at risk for this problem after any aortic surgery, regardless of the presence or absence of prosthetic graft material.

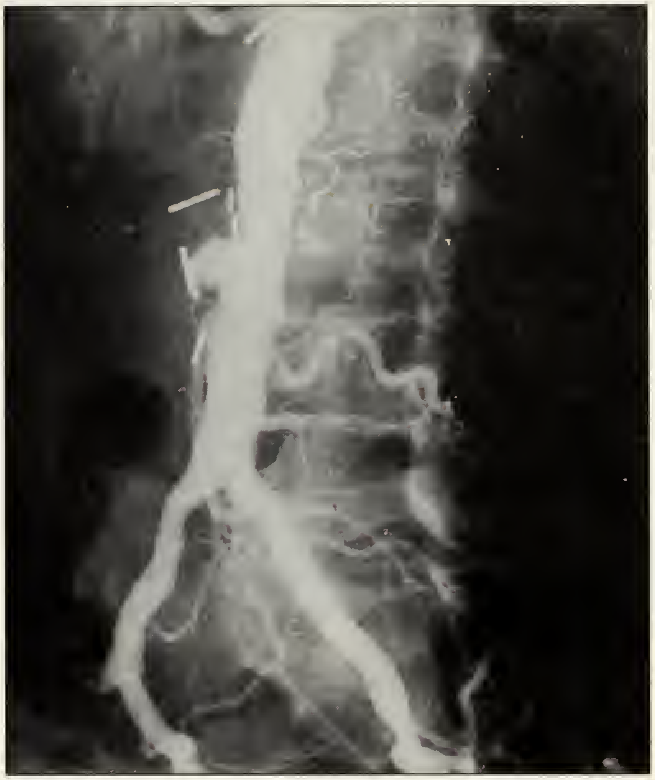


Fig 1. RPO projection of an abdominal aortogram which reveals a 1.5 cm pseudoaneurysm on the anterior lateral aspect of the intrarenal aorta.

References

1. Elliot JP, Smith RF, Szilagi DE: Aortoenteric and paraprosthetic-enteric fistulas. *Arch Surg* 1974;108:479-490.
2. Paaske WP, Buchardt Hansen HJ: Graft-enteric fistulas and erosions. *Surg Gynecol Obstet* 1985;161:161-164.
3. Champion MC, Sullivan SN, Coles JC, et al: Aortoenteric fistula: Incidence, presentation, recognition and management. *Ann Surg* 1982;195:314-317.
4. Cordell AR, Wright RH, Johnston FR: Gastrointestinal hemorrhage after abdominal aortic operations. *Surgery* 1960;48:997-1005.
5. Sheil AGR, Reeve TS, Little JM, et al: Aortointestinal fistulas following operations on the abdominal aorta and iliac arteries. *Brit J Surg* 1969;56:840-843.
6. Reilly LM, Altman H, Lusby RJ, et al: Late results following surgical management of vascular graft infection. *J Vasc Surg* 1984;1:36-44.
7. Flye MW, Thompson WM: Aortic graft-enteric and paraprosthetic-enteric fistulas. *Am J Surg* 1983;146:183-187.
8. Wallace WE, Cooley DA, Duncan JM, et al: The management of aortoduodenal fistula by in situ replacement of the infected abdominal aortic graft. *Ann Surg* 1987;205:727-732.
9. Yeager RA, McConnell DB, Sasaki TM, et al: Aortic and peripheral prosthetic graft infection: Differential management and causes of mortality. *Am J Surg* 1985;150:36-43.
10. DeWeese MS, Fry WJ: Small-bowel erosion following aortic resection. *JAMA* 1962;179:882-886.
11. Clayton H, Birch L, Cardwell ES, et al: Suture-line rupture of a nylon aortic bifurcation graft into the small bowel. *Arch Surg* 1956;73:947-949.
12. Bunt TJ: Synthetic vascular graft infections. II: Graft-enteric erosions and graft-enteric fistulas. *Surgery* 1983;94:1-9.
13. O'Mara C, Imbendo AL: Paraprosthetic-enteric fistula. *Surgery* 1977;81:556-566.

14. Donovan TJ, Bucknam CA: Aorto-enteric fistula. *Arch Surg* 1967;95:810-820.
15. Busutill RW, Rees W, Baker J, et al: Pathogenesis of aorto-duodenal fistula: Experimental and clinical correlates. *Surgery* 1979;85:1-13.
16. Buchbinder D, Leather R, Shah D, et al: Pathologic interactions between prosthetic aortic grafts and the gastrointestinal tract. *Am J Surg* 1980;140:192-198.
17. Perdue GD, Smith RB, Ansley JD, et al: Impending aortoenteric hemorrhage: The effect of early recognition on improved outcome. *Ann Surg* 1980;192:237-249.
18. Reilly LM, Ehrenfeld WK, Goldstone J, et al: Gastrointestinal tract involvement by prosthetic graft infection: The significance of gastrointestinal hemorrhage. *Ann Surg* 1985;202:342-348.

The Authors

ALFRED D. HARDING, M.D.
W. KIRT NICHOLS, M.D.

The authors are from the Department of Surgery, University of Missouri Hospital and Clinics and H.S. Truman Memorial Veterans Hospital, Columbia, Missouri.

Reprints

W. Kirt Nichols, M.D.
Department of Surgery
University of Missouri Hospital and Clinics
1 Hospital Drive
Columbia, Missouri 65212

Omaha Mid-West Clinical Society

57th Annual
Postgraduate Assembly

November 2,3,and 4, 1989

Red Lion Inn
Omaha, Nebraska

For Information Contact:

Lorraine Seibel
Omaha Mid-West Clinical Society
7363 Pacific Street, Suite 205-B
Omaha, Nebraska 68114
(402) 397-1443

AIM HIGH

READY
FOR A CHANGE
OF PACE?

The Air Force has openings for **Physician Specialists**. You can enjoy better working hours, 30 days of vacation with pay each year and a unique and enjoyable life-style for you and your family while serving your country. Ask a health professions recruiter about our outstanding pay and benefits package. Call

HEALTH PROFESSIONS
1-800-423-USAF
TOLL FREE

AIR FORCE

Why does
JACKSON &
COKER
recruit more
physicians
each year
than any other
company?

☐ Largest pool of available physicians in the nation

☐ Network of 7 regional offices nationwide

☐ Expertise that produces unparalleled results in recruiting quality physicians

☐ Proven system that produced over 1,000 placements in the last 3 years.

JACKSON AND COKER

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

Most patients need only one.

K-DUR™ 20 Microburst Release System™
(potassium chloride) 20mEq Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System®
(potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2 For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions. Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g , spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g , spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-OUR tablets is, at present, unknown. K-OUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics, see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity K-OUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the OT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3 Correction of acidosis, if present, with intravenous sodium bicarbonate.
4 Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity

I002004

13944326
Rev 4/87

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

★ Premiums are guaranteed for the first 5 policy years.
★ Convertible to any level premium whole life offered by company.
★ Premiums increase each year to age 75 then level.
★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ ____________________

Date of Birth ____________________

Smoker/Non-Smoker (circle one)

Name ____________________

Address ____________________

City/State ____________________

Zip ______________ Phone ______________

New Members

Roderic C. Crist, M.D., St. Francis Medical Center, 1701 Lacey St., Cape Girardeau 63701, has become a member of the Cape Girardeau County Area Medical Society. Dr. Crist received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1982. He completed his residency at Blessing & St. Mary, Southern Illinois University, Quincy, IL. Dr. Crist specializes in family practice/emergency medicine.

Stephen E. Dorsch, M.D., 17611 E. 24 Highway, Independence 64056, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Dorsch received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1982. He completed his residency at Truman Medical Center East, Kansas City, MO. Dr. Dorsch specializes in family practice.

Christa L. Hines, M.D., 1035 Bellevue, Suite 306, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hines obtained her medical degree at Washington University School of Medicine in 1982. She completed her residency at the University Hospital, St. Louis Medical Center, St. Louis, MO. Dr. Hines specializes in psychiatry.

Donna J. Holzum, M.D., Cape Anesthesia Group, Cape Girardeau 63701, has become a member of the Cape Girardeau County Area Medical Society. Dr. Holzum received her preliminary education at Washington University and obtained her medical degree at the University of Missouri-Columbia in 1985. She completed her residency at Loyola University Medical Center, Maywood, IL. Dr. Holzum specializes in anesthesiology.

Martha L. Hurley, M.D., 1900 Copper Oaks Circle, Blue Springs 64015, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hurley received her preliminary education at Kansas State University and obtained her medical degree at the University of Kansas in 1979. She completed her residency at Wilford Hall Medical Center, Lackland Air Force Base, Texas. Dr. Hurley specializes in obstetrics/gynecology.

Paul M. Joubert, D.O., Consortium for Health Education, 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Joubert received his preliminary education at the University of Rhode Island and obtained his osteopathic degree at the University of Health Sciences in 1987. He is completing his residency at UMKC School of Medicine Affiliated Hospitals - Consortium for Health Education, Kansas City, MO. Dr. Joubert specializes in internal medicine.

Tommy Khiong, M.D., Consortium for Health Education, 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Khiong received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1987. He is completing his residency at the University of Missouri-Kansas City Affiliated Hospitals - Consortium for Health Education, Kansas City, MO. Dr. Khiong specializes in internal medicine.

Michael E. Monaco, M.D., 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Monaco received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1987. He is completing his residency at the UMKC School of Medicine Affiliated Hospitals, Consortium for Health Education, Kansas City, MO. Dr. Monaco specializes in internal medicine.

Setti S. Rengachary, M.D., Veterans Administration Medical Center, 4801 Linwood Blvd., Kansas City 64128, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Rengachary received his preliminary education at Madurai College - Madural, India and obtained his medical degree at the Madurai Medical College - India in 1960. He completed his residency at Kansas University Medical Center, Kansas City, KS. Dr. Rengachary specializes in neurosurgery.

Jean P. Romanace, M.D., Missouri Rehabilitation Center, 600 N. Main, Mt. Vernon 65712, has become a member of the Ozarks Area Medical Society. Dr. Romanace obtained his medical degree at the Faculte De Medecine De Reims - France in 1970. He completed his residency at Cornell Medical Center, New York, NY. Dr. Romanace specializes in physical medicine and rehabilitation.

Chris R. Rosenquist, M.D., 63 Doctors' Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Area Medical Society. Dr. Rosenquist received his preliminary education at Southeast Missouri State University and obtained his medical degree at the University of Missouri-Columbia in 1986. He completed his residency at St. Francis Hospital, Memphis, TN. Dr. Rosenquist specializes in family practice.

William M. See, M.D., Missouri Cardiovascular & Thoracic Surgeons, 1701 East Broadway, Columbia 65201, has become a member of the Boone County Medical Society. Dr. See received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1980. He completed his residency at the University of Colorado Health Science Center, Denver, Co. Dr. See specializes in thoracic & cardiovascular diseases.

Bradley S. Thedinger, M.D., 3100 Broadway, Suite 509, Kansas City 64111, has become a member of the

Metropolitan Medical Society of Greater Kansas City. Dr. Thedinger obtained his medical degree at the University of Kansas Medical Center, School of Medicine in 1976. He completed his residency at Mercy Medical Center, Denver, CO. Dr. Thedinger specializes in otolaryngology.

■ **James A. Thorp, M.D.,** St. Luke's Perinatal Center, 4400 Wornall Road, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Thorp received his preliminary educaton at Western Michigan University and obtained his medical degree at Wayne State University in 1979. He completed his residency at the University of Colorado/St. Luke's Hospital, Denver, CO. Dr. Thorp specializes in obstetrics/gynecology.

■ **J. Michael Waring, M.D.,** St. Joseph Hospital, 1000 Carondelet, Kansas City 64104, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Waring received his preliminary education at Kansas University and obtained his medical degree at the Kansas University School of Medicine in 1974. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Waring specializes in anesthesiology.

■ **Lee T. Weng, M.D.,** 17221 E. 23rd St., Suite 206, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Weng received his preliminary education at Cairo University, Cairo, Egypt and obtained his medical degree at Cairo University, Cairo, Egypt in 1979. He completed his residency at Western Missouri Mental Health, Kansas City, MO. Dr. Weng specializes in general psychiatry.

■ **Lisa J. Zacharewicz, M.D.,** Consortium for Health Education, 2727 Main, Suite #100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Zacharewicz received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at the UMKC School of Medicine in 1986. She completed her residency at the University of Missouri-Kansas City Affiliated Hospitals, Kansas City, MO. Dr. Zacharewicz specializes in internal medicine.

■ RESIDENT SECTIONS

St. Louis Residents Section

Gregory A Benbow, D.O. — *family practice*
Jacquelyn Hall-Davis — *psychiatry*
J. Marie Holman — *internal medicine*
Mohammed B. Khan — *internal medicine*
Raffi K. Krikorian — *internal medicine*
Ryan S. McKinnon — *Transitional year*
Thomas A. Minke — *obstetrics/gynecology*
Eleatha L. Surratt — *psychiatry*

Greene County Residents Section

Deborah A. Herrmann — *family practice*

North Central Residents Section

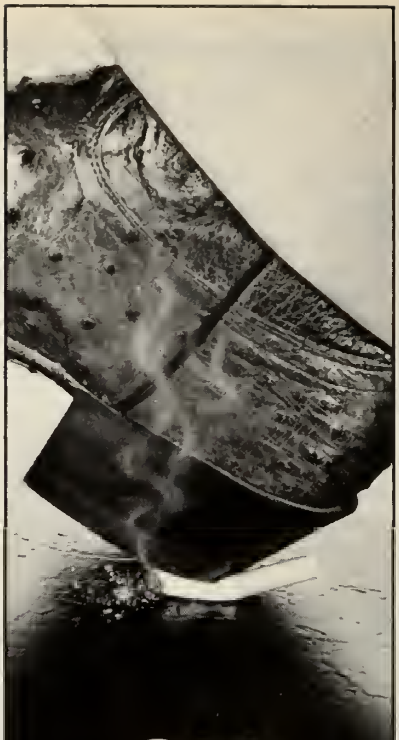
Michael P. Estivo, D.O. — *orthopedic surgery*

Metro Med Residents Section

Cynthia A. Alsup — *obstetrics/gynecology*
Ermalyn L. Kubart — *pediatrics*
Kathy M. Perryman — *anesthesiology (pediatric)*

Boone County Residents Section

John B. Draper — *family medicine*
M. Katherine Heilman — *obstetrics/gynecology*
Robin R. Jones — *anesthesiology*
William R. LaMear — *otolaryngology*
James M. Sylvester — *nuclear medicine*



GIVE SMOKING A KICK IN THE BUTT.

With every puff, your health could be going up in smoke. If you'd like to kick the habit but you need help, call your local American Cancer Society. It could be the first step to quitting for life.

AMERICAN CANCER SOCIETY®

Professional help for health professionals.

Substance abuse is a growing problem among health professionals. At Timberlawn Psychiatric Hospital, a special program exists to help health professionals overcome substance abuse problems.

A range of treatment options, individual and group therapy programs, and other recovery-oriented services are all geared toward the unique needs of the health professional. An individualized evaluation leads to selection of the most appropriate treatment program, which is further enhanced by specialized aftercare and monitoring services. Treatment team members include Board Certified psychiatrists, clinical psychologists, psychiatric social workers and substance abuse counselor specialists with certification in their field.

At Timberlawn, we understand the unique challenges faced by health professionals today, and we're here to help. For more details on our facility or referral arrangements, contact: Dr. Edgar P. Nace, Chief of Substance Abuse Services.

TIMBERLAWN
PSYCHIATRIC HOSPITAL
PROFESSIONALS HELPING PROFESSIONALS
4600 Samuell Blvd. • P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958 • 1-800-426-4944

In Memoriam

■ **Oliver Abel, M.D.,** died August 5, 1989 at the age of 59. Dr. Abel, an internal medicine specialist, practiced medicine in the St. Louis area for more than 28 years. A native of Clayton, he graduated in 1951 from Westminster College in Fulton. He obtained his medical degree at the Washington University School of Medicine in 1955. He was a captain in the Army Medical Corps from 1957 to 1959. Dr. Abel was a member of the St. Louis Metropolitan Medical Society.

■ **Ernest L. Glasscock, M.D.,** died July 21, 1989 at the age of 82. Dr. Glasscock, a pediatrician, practiced medicine in the Kansas City area for 35 years before retiring in 1970. He was chairman of the department of pediatrics at St. Luke's Hospital from 1949 to 1955. He taught pediatrics at the University of Kansas School of Medicine from 1946 to 1960 and was later an assistant clinical professor. He obtained his medical degree at the Washington University School of Medicine in 1931. Dr. Glasscock was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Ernest L. Tarrasch, M.D.,** died July 17, 1989 at the age of 79. Dr. Tarrasch, an ophthalmologist, practiced medicine in Springfield for 43 years. An active concert musician, his musical performances were well known. His musical contributions to the Springfield area included: pianist with the Springfield Symphony, coach for the Springfield Regional Opera, organist for the United Hebrew Congregation, and pianist with many chamber music ensembles. Dr. Tarrasch obtained his medical degree at the Medical Academy in Dusseldorf, Nordhein Westfalen, Germany in 1933.

Integrity.
Yours, and
Ours.

Financial soundness.
Yours, and
Ours.

The future.
Yours, and
Ours.

Medical Defense
Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MEDICAL PROFESSIONAL LIABILITY INSURANCE

Medical School News

St. Louis University

Shobha N. Joshi, M.D., assistant professor of medicine and interim director of the division of gastroenterology, St. Louis University School of medicine, has been named as medical director of St. Louis University Medical Center's liver transplantation program, effective August 1.

Douglas Lloyd Beck, M.A., has been named chief of audiology and instructor in the department of otolaryngology, St. Louis University School of Medicine, effective August 1.

Jean deBlois, C.S.J., R.N., Ph.D., has been named associate director of the Center for Health Care Ethics, St. Louis University Medical Center, effective in July. She has served as associate for the Center since 1988.

Cathleen R. Carlin, Ph.D., assistant professor of molecular virology at the Institute for Molecular Virology, St. Louis University Medical Center, has been awarded a five-year, $886,761 grant from the National Cancer Institute. The grant will be used to study "EGF Receptor Down-Regulation by Adenovirus." Co-investigator on the project is **William S.M. Wold, Ph.D.**, professor of molecular virology at the institute.

John W. Wallis, Jr., Ph.D., assistant professor of biochemistry and molecular biology, St. Louis University School of Medicine, has been awarded a five-year $343,538 grant from the National Institute of General Medical Sciences. The award will be used to study the "Genetics of Recombination Between Repeated Elements."

Sherin U. Devaskar, M.D., associate professor of pediatrics in the division of neonatology, St. Louis University School of Medicine, has been awarded a five-year, $340,965 grant from the National Institute of Child Health and Human Development.

Dr. Devaskar will use the award to research the "Developmental Regulation of Neuronal Insulin-like Peptide."

Rodney M. Coe, Ph.D., professor and chairman of the department of community medicine, St. Louis University School of Medicine, has been awarded two grants from the National Institute on Aging to support two separate projects.

Dr. Coe has received a three-year, $240,000 renewal grant to support the Geriatric Leadership Academic Award. The funding will promote further development of a coordinated, multidisciplinary program of research training and education in gerontology and geriatrics at the school of medicine.

The one-year, $4,940 grant from the Institute will be used to support the presentation of the Eighth Annual Symposium on Geriatrics and Gerontology, titled "Prospective Payment Systems and Care of the Elderly." This symposium, co-sponsored by St. Louis University and the St. Louis University Veterans Affairs Medical Center, was held in September in St. Louis.

Arnold J. Kahn, Ph.D., professor of pediatric/adolescent medicine, St. Louis University School of Medicine, and director of the Pediatric Research Institute at Cardinal Glennon Children's Hospital, has been awarded a $119,271 renewal grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases.

The grant will be used to fund part of a continuing eight-year, half-a-million-dollar study of the "Biochemical Characterization of Osteoclasts" that began in 1986.

Nancy J. Glavin, Ph.D., assistant research professor in the department of pathology, St. Louis University School of Medicine, has been awarded a $15,995 grant from the American Heart Association, Missouri Affiliate.

The grant will be used to investigate the molecular mechanisms of cell attachment to substrate, one of the phenomena occurring in the formation of atherosclerotic plaques.

Anthony M. Vernava III, M.D., assistant professor of surgery and chief of the colon rectal surgery section, St. Louis University School of Medicine, has been awarded the prestigious Cancer Research Fellowship by the Foundation for Promotion of Cancer Research in Tokyo.

Dr. Vernava was in Japan for six weeks working directly with **Keiichi Hojo, M.D.**, chief of colon rectal surgery at the National Cancer Center Hospital in Tokyo. The two evaluated Dr. Hojo's unique operative approach toward the treatment of rectal cancer. In addition, both Dr. Vernava and Dr. Hojo are organizing an international cooperative trial to evaluate the new approach.

Margaret H. Cooper, Ph.D., associate research professor in the department of otolaryngology-head and neck surgery and the department of anatomy/neurobiology, St. Louis University School of Medicine, has been selected to receive a 1989 Honor Award from the American Academy of Otolaryngology-Head and Neck Surgery.

Katie Pegors, a pathology doctoral candidate at St. Louis University School of Medicine, has been awarded the Mark Addison Roe Memorial Fellowship from the national SIDS Foundation.

Pegors will use the award to

study the skeletal muscle of infants who have died from Sudden Infant Death Syndrome (SIDS). She will determine if the skeletal muscle in such infants is morphologically different from the skeletal muscle in children without SIDS.

■ St. Louis University Medical Center is evaluating the effectiveness of a rare snake venom extract called Ancrod as a means for treating stroke patients.

Venom from the Malayan pit viper has been shown to safely and effectively lower fibrinogen levels, which are involved in clotting and increasing blood viscosity, and improve blood flow to the area of a stroke. Ancrod has been used in Europe for approximately six years in connection with stroke studies and is now marketed in Canada for treatment of peripheral vascular disease.

Preliminary results show a dramatic and immediate benefit for patients who have been administered Ancrod within six hours of the onset of stroke symptoms. The results are significant because stroke remains the third leading cause of death and the most common cause of disability in the United States.

Principal investigators for the study are **Camilo R. Gomez, M.D.**, assistant professor of neurology and director of the Stroke Resource Center at St. Louis University Medical Center, and **John B. Selhorst, M.D.**, professor and chairman of the department of neurology.

■ St. Louis University Medical Center is one of ten centers in the country evaluating a unique Japanese orthopedic device for certain spinal conditions.

The "Kaneda" device can be utilized in patients with spinal infections, tumors or fractures, or in patients who have degenerative back conditions. It is FDA-approved and permanently holds spinal bone grafts from the front of the spinal column. Standard devices hold the spine from the back.

Behrooz A. Akbarnia, M.D., professor and vice chairman of the department of orthopedic surgery and director of the medical center's Spinal Reconstruction Center, says the Kaneda device is showing great promise. Dr. Akbarnia also said the Kaneda device cuts down the number of surgical procedures needed for spinal fractures.

■ **C. Alec Pollard, Ph.D.**, associate professor of psychiatry and human behavior and director of the anxiety disorders center, division of behavioral medicine, St. Louis University School of Medicine, presented a research paper and chaired a symposium at the convention of the American Psychological Association in New Orleans on August 10-15 on the "Relationship Between Birth Order and Obsessive Compulsive Disorder,"

■ A surgeon at St. Louis University Medical Center traded in his surgical gloves for a baseball mitt when the Cardinals took on the New York Mets on August 3, at Busch Stadium.

Paul Garvin, M.D., who performed the first-kidney-pancreas transplant in the St. Louis area and directs what is now the seventh largest such program in the county, threw out the first ball for the Cardinals vs. Mets game. The pitch signified the kick-off for "Organ Donation Awareness Day at Busch Stadium," sponsored by St. Louis University Medical Center.

University of Missouri-Columbia

■ **Weldon Webb**, former assistant dean for external affairs, has been promoted to associate dean, and **Michael Sundall** has been appointed assistant to the dean for clinical affairs.

Since 1984, Webb has been responsible for external affiars at the school including alumni relations, development, CME, publications and media relations. He also has served as executive vice president of the Medical School Foundation since 1985. He currently serves as president of Meeting Planners International.

Sundall will continue his duties as clinic administrator to University Physicians while coordinating clinical activities between the School of Medicine and the University Hospital and Clinics. He serves as president of the Missouri Medical Group Management Association and a fellow of the American College of Medical Group Administrators.

■ **Helen Braley-Mullen, Ph.D.**, professor of medicine and microbiology, received a five-year, $500,000 grant from the National Institute of Allergy and Infectious Diseases for her research on the mechanism of T-cell activation by type 2 antigens.

■ **Sheldon R. Braun, M.D.**, associate professor of pulmonary, critical care and environmental medicine, presented "Incidence and Clinical Correlates of Nocturnal Awakening Secondary to Dyspnea in Chronic Obstructive Airway Disease (COAD)" at the 32nd annual Aspen Lung Conference June 7-10 in Aspen, Colo.

■ **Robert P. Burns, M.D.**, professor and chairman of ophthalmology, accepted a $40,000 grant from Research to Prevent Blindness.

■ **James D. Campbell, Ph.D.**, assistant professor of family and community medicine, presented a paper at the 11th International Conference on the Social Sciences and Medicine in July at Leeuwenhorst Congres Center, Netherlands. His presentation on collaborative practice and styles of team care was based on data collected as part of the Joint Practice Evaluation Project supported by a grant from the W.K. Kellogg Foundation.

■ **Robert Conway, M.D.**, clinical assistant professor of physical medicine and rehabilitation, is the new Missouri representative for the American Spinal Cord Injury Association. He will communicate on an annual basis to the regional representative. The association is encouraging mandatory reporting of spinal cord injuries throughout the nation to obtain good epidemiologic data. Its goal is to determine true incidence of the injuries and the effectiveness of intervention such as model systems care.

■ **Graig Eldred, Ph.D.**, research assistant professor of ophthalmology, received a five-year renewal grant of $575,472 for his research into lipofuscinogenesis in retinal pigment epithelium.

■ **Marc W. Haut, Ph.D.**, postdoctoral fellow in the department of physical medicine and rehabilitation, presented "Gist Recall of Prose Following Closed Head Injury" Aug. 15 at the American Psychological Association meeting in New Orleans.

■ **H.D. Kim**, professor and chairman of pharmacology, presented a paper July 11 to the 31st International Congress of Physiological Sciences in Helsinki, Finland. While in Europe, he also gave seminars in Odense, Denmark and Aachen, West Germany.

■ **Sara E. Walker, M.D.**, professor of immunology and rheumatology, attended the National Institutes of Health Fellowship Study Section July 19-21 in Bethesda, MD, as a member of the advisory committee. She and rheumatology fellow **Robert W. McMurry, M.D.**, received a two-year award of $20,065 from the Lupus Foundation of America for research on the influence of prolactin on the activity of systemic lupus erythematous in the NZB/W mouse.

University of Missouri-Kansas City

■ Two UMKC faculty members are presiding over the recently formed Kansas City AIDS Research Consortium (KCARC). **Larry Dall, M.D.**, docent and associate professor, is KCARC president and **Joe Brewer, M.D.**, clinical assistant professor, is vice president for research. The organization hopes to make newer therapies and research into AIDS available to 95% of the HIV-infected patients in the Kansas City metropolitan area. The consortium brings together the expertise of practitioners, and clinical and basic scientists, a number of whom are UMKC faculty members.

"We hope to study new promising therapies for the HIV virus itself to control and slow progress of the disease," said Dr. Brewer. The group will focus on the areas of fungal infections, prophylaxis, and pharmacokinetics.

Among the first of the consortium's projects is a six-month study of the drug AZT. The KRARC will modify doses of AZT, usually taken every four hours, to determine whether AIDS patients can take the drug less often. The study will be conducted at six other sites around the country.

■ **Paul A. Williams, M.D.**, professor of community medicine and family practice, recently assumed two major appointments: president of Truman Medical Center's Medical/Dental staff and chairman of TMC's Department of Community Medicine and Family Practice located at TMC-East. Prior to his family practice chairmanship, Dr. Williams was director of TMC's family practice residency program and vice chairman of the department.

■ Three physicians have joined UMKC and Truman Medical Center's teaching staff as docents: **Gerry Love, M.D.**, a 1985 UMKC graduate is a docent and second-year cardiology fellow. He completed his residency with UMKC affiliated hospitals during which time he spent one year as chief resident, and spent his first year as a cardiology fellow with TMC. **James Walden, M.D.**, a gastroenterologist, is a graduate of Baylor College of Medicine, Houston. He did his internship, residency and fellowship with UMKC affiliated hospitals. **Leland Graves, M.D.**, a 1983 UMKC graduate, completed his internship and residency at Kansas University Medical Center, followed by a two-year endocrinology fellowship at KU.

■ UMKC and The Children's Mercy Hospital have received a $78,000 grant from Merieux Institutes Inc., for a research project, "PRP-T Multicenter Study," headed by **Lloyd C. Olson, M.D.**, professor of pediatrics. Children's Mercy is one of six centers that is evaluating a new vaccine in clinical trials that will help prevent infection in infants by the bacterium Hemophilus influenzae. The bacterium most frequently causes meningitis in infants under two years of age; vaccines that are currently available cannot be administered to children under 18 months. The new vaccine is in the final phases of testing for use in younger children.

■ **Mahmoud Ahmed, Ph.D.**, associate professor, was awarded a two-year $152,000 grant from the National Institute on Drug Abuse for a study on "The Effect of Drug Abuse on the Placental Opiate System." The study is investigating the effects of morphine, methadone and heroin on the opiate receptors and opiate vectors in non-neural tissue, as well as the effect of drug use in vivo.

■ **Paul G. Rothberg, Ph.D.**, associate professor and molecular geneticist at Children's Mercy Hospital, recently was awarded a five-year $283,000 grant from the National Institutes of Health for a study on "Synthesis and Stability of myc RNA in Colon Cancer Cells." Preliminary results demonstrate that colon cancer cells differ from other carcinomas in regulation of myc RNA abundance. The study will lead to the definition of cellular regulatory mechanisms that differ between normal and neoplastic colonic epithelial cells.

■ Former **Dean Harry S. Jonas, M.D.**, will make a return engagement Oct. 22 as the keynote speaker at the School's Year - 1 convocation. It was under Dr. Jonas' administration as Medical School dean that the tradition of convocation began. The annual event officially welcomes first-year students and their parents.

■ **Paul A. Williams, M.D.**, professor, made a presentation on "Flexible Sigmoidoscopy in the Family Physicians' Office" at the 21st Missouri Academy of Family Physicians Scientific Assembly.

■ UMKC and Truman Medical Center this summer sponsored the ninth annual Summer Scholars Program. By exposing minority and disadvantaged high-school juniors and seniors to the health-care profession, the program gives the students an opportunity to experience medicine first-hand, as well as to help prepare them for college interviewing and academics.

■ **Rebecca Schubert** has joined the

Medical School staff as alumni development manager. Ms. Schubert, who previously had her own firm for conference and event management, has a joint appointment as development associate for Truman Medical Center's Charitable Foundation.

EAT RIGHT, LIVE LONG AND PROSPER.

EATING RIGHT IS HIGHLY LOGICAL.

Recommendations:
Eat high-fiber foods, such as fruits, vegetables, and whole grain products. Eat fewer high-fat foods. Maintain normal body weight. And live long and prosper.

CALL THE AMERICAN CANCER SOCIETY AT 1-800-ACS-2345 FOR FREE NUTRITION INFORMATION.

AMERICAN CANCER SOCIETY®

STAR TREK ® & © 1989 PARAMOUNT PICTURES CORPORATION ALL RIGHTS RESERVED. THE AMERICAN CANCER SOCIETY AUTHORIZED USER.

Who would say something nice about a bill collector?

Over 1,200 professional and trade associations, including yours.

It's true. The bill collecting services of I.C. System have been endorsed by over 1,200 associations around the country, including the one you belong to.

We're proud of these endorsements. We've made a concerted effort to bring high standards of professionalism, ethics, and effectiveness to the collection process. We believe we've succeeded and, apparently, your association agrees.

So if you've been billing people who aren't paying you, now you know who to contact.

Although we're headquartered in St. Paul, Minnesota, we have communication centers in every state of the union. We'll assign a local I.C. representative to your account who will be supported by a full range of collection services and personnel, including carefully-trained telephone contact specialists. We'll even provide initial training on how to use our service for the person(s) in your office handling accounts receivable.

But most important, we *guarantee* results. Our fee structure combines a very competitive commission rate with a retainer (corporate or standard) scaled to your needs. And we guarantee to keep collecting for as long as it takes to recover *at least ten times the amount of that retainer.*

To find out how the I.C. System approach can work for you, call toll free (800) 443-4123, ext. 621. In Minnesota, call (612) 483-8201, ext. 621. Or return the coupon.

I.C. System® The System Works.®

3386

I want to recover the money that's owed me. Please provide me with information on the I.C. System approach.

Name__________
Title__________
Firm__________
Address__________
City__________ State______ Zip______
Telephone number__________

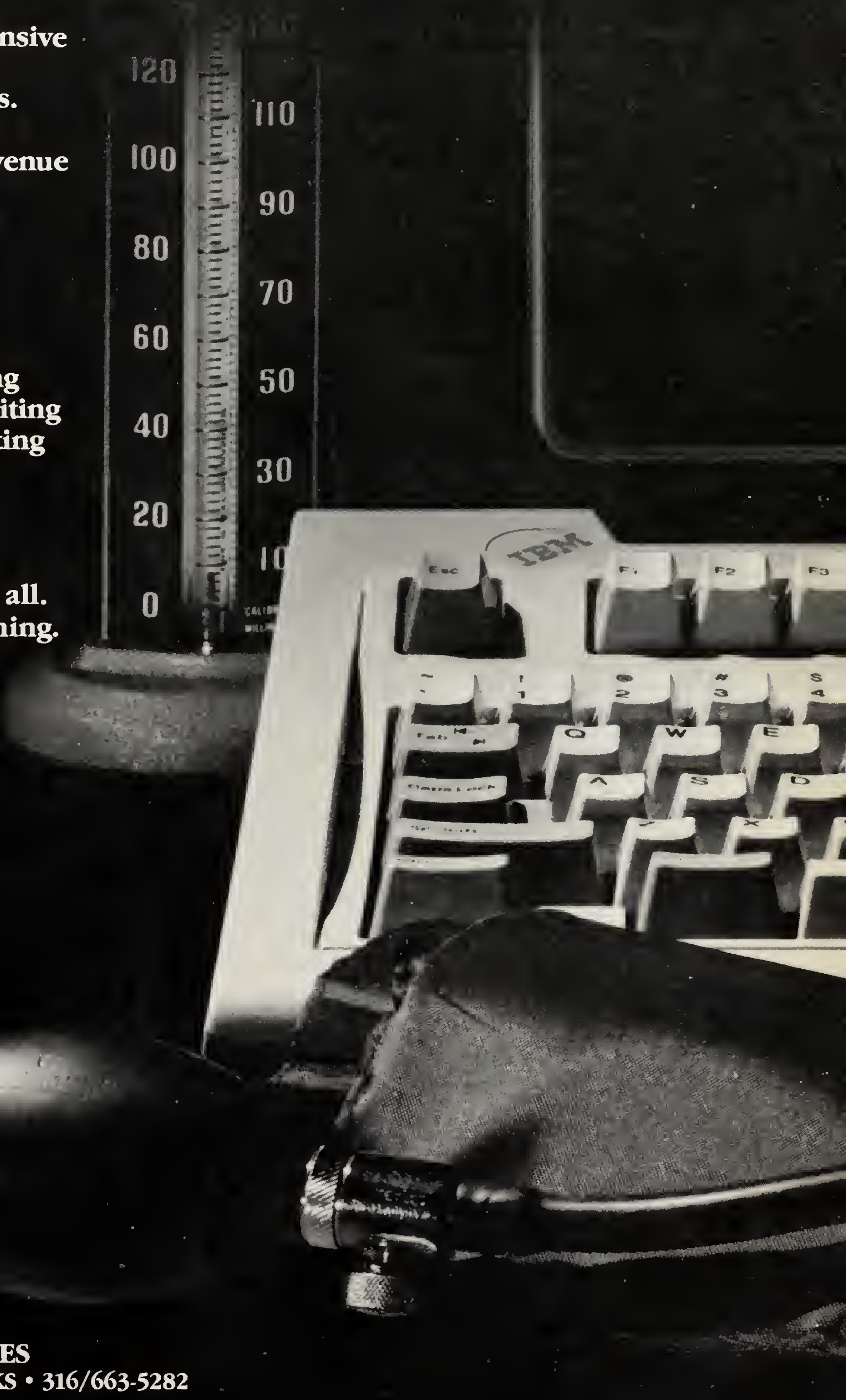
Mail to: I.C. System, Inc., 444 East Highway 96, P.O. Box 64639, St. Paul, Minnesota 55164-0639

PRESSURE.

Relieve it. With our comprehensive computer system designed specifically for medical offices.

- Accounts receivable with revenue reporting
- Insurance processing with electronic claims
- Specialized HMO reports
- Comprehensive general accounting
- Collections with letter writing
- Appointments with letter writing
- Patient recall with letter writing
- IBM hardware
- Periodic user seminars
- ...and much more

It's easy because we provide it all. IBM hardware. Software. Training. Ongoing support. PDS. In business since 1973...with more than 100 satisfied customers. PDS. To help you manage your office even better.



PDS

PROFESSIONAL DATA SERVICES
3 Compound Drive • Hutchinson, KS • 316/663-5282
Kansas City • 913/491-3644
Lincoln, NE • 402/476-9322

Physician's Recognition Awards

Sixty-seven MSMA members qualified for the MSMA-AMA Physician's Recognition Award during July-August 1989. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Audrain

Joseph A. Corrado, *Mexico*

Boone

Emily W. Guyer, *Columbia*
Richard A. Heimburger, *Columbia*
Joseph J. Muscato, *Columbia*
Mary S. Muscato, *Columbia*
Dean A. Nierling, *Columbia*

Buchanan

Gary A. Dyer, *St. Joseph*

Butler-Wayne-Ripley-Carter

Abbiah N. Reddy, *Poplar Bluff*

Clay-Platte

Richard P. Bowles, *Liberty*
Donald E. Walker, *Kansas City*

Cole

John C. Lyskowski, *Jefferson City*

Franklin-Gasconade-Warren

James T. Shaw, *Hermann*

Greene

Harry L. Ellis, *Springfield*
James L. Hargis, *Springfield*
John H. Ippensen, *Springfield*
Gregory Janeczko, *Springfield*
Ernest Lorenc, *Springfield*
Donald C. Nelson, *Springfield*
Herbert L. Warres, *Springfield*

Jasper

Edward M. Grim, *Joplin*
Thomas B. Moore, *Joplin*
Ghaleb A. Saab, *Joplin*

Jefferson

Benjamin I. Albano, *Crystal City*
Michael K. Blank, *DeSoto*

Johnson

Hugh A. Hanna, *Warrensburg*

Metro. Med. of Greater Kansas City

Jean T. C. Barton, *Kansas City*
Richard E. Baska, *Kansas City*
Menzie H. Brown, *Kansas City*
Raymond J. Caffrey, *Independence*
Dale E. Darnell, *Kansas City*
William E. Dorzab, *Kansas City*
Edward Goldsich, *Kansas City*
Richard K. Gutknecht, *Independence*
Frederick B. Lintecum, *Kansas City*
Gary F. Lockwood, *Kansas City*
Edwin E. MacGee, *Kansas City*
Janet S. Mertz, *Kansas City*
Alan H. Morris, *St. Louis*
Margaret B. Nickell, *Kansas City*
Sarvotham K. Reddy, *Raytown*
Gerhard W. Schottman, *Kansas City*
Elson F. Seitz, *Independence*
Kim C. Wade, *Kansas City*

Mineral Area

Narendar K. Datta, *Crystal City*

Northeast

Bryson R. McHardy, *Hannibal*

Perry-Ste. Genevieve

John S. Yang, *Ste. Genevieve*

Pettis

Donald K. Allcorn, *Cole Camp*

St. Charles-Lincoln

Donald E. Binz, *St. Charles*
John H. Uhlemann, *St. Charles*

St. Louis Metropolitan

Gerald N. Bart, *St. Louis*
Charles R. Blackwell, *St. Louis*
James P. Boedeker, *St. Louis*
John J. Bonacorsi, *Bridgeton*
Robert A. Brennan, *St. Louis*
Thomas J. Cooper, *St. Louis*
David Feldman, *St. Louis*
Thomas P. Hanley, *St. Louis*
Albert E. Hesker, *Chesterfield*
William F. Hoffman, *St. Louis*
Ira J. Kodner, *St. Louis*
Ervin Lipschitz, *St. Louis*
Michael S. Richardson, *St. Louis*
Edward J. Shaw, *St. Louis*
Lewis C. Vollmar, *St. Louis*
Bruce I. White, *St. Louis*
Vallee L. Willman, *St. Louis*

SEMO

David A. Pfefferkorn, *Sikeston*

MISSOURI
DAW
MD
DISPENSE AS WRITTEN

The practice is yours.
The patients are yours.
The prescriptions are yours.

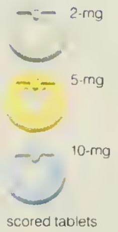
Make the prescribing decision yours, too.

Sign on the right on
the "Dispense as written" line.

Specify VALIUM®
brand of
diazepam/Roche Ⓘⓥ

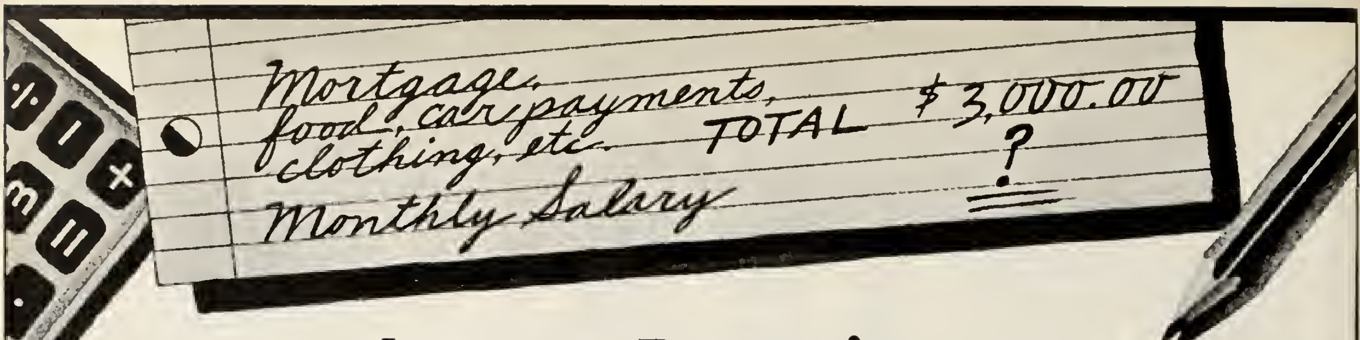
The cut out "V" design is a registered trademark of Roche Products Inc

The one you know best.


2-mg
5-mg
10-mg
scored tablets

Copyright © 1988 by Roche Products Inc
All rights reserved

ROCHE **Roche Products**
Roche Products Inc
Manati, Puerto Rico 00701


Mortgage, food, car payments, clothing, etc. TOTAL $3,000.00
Monthly Salary ?

Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance programs offer you coverage and cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: James
FRED.S.JAMES&CO.OFMISSOURI,INC.

Eastern Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______

Address ______

City ______ State ______ ZIP ______

Phone: (   ) ______ Best time to call: ______

Continental Insurance℠

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

October

5 - 7 **Biomedical Image Processing with Microcomputers** — Location: Marriott's Pavilion Hotel, St. Louis, MO. Contact: Loretta Giacoletto, CME Office, Washington University School of Medicine, Box 8063, S. Euclid, St. Louis, MO 63110. 314/362-6891.

6 **Transplantation** — Location: Research Medical Center, Kansas City, MO. Contact: Turner L. Minnigerode, M.D., Research Medical Center, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

6 **Care of the Person with HIV Infection and AIDS** — Location: Sheraton West Port Inn, 191 West Port Plaza, St. Louis, MO. Contact: Susan Wightman, AIDS Clinical Trials Unit, Washington University School of Medicine, 4940 Audubon Ave., St. Louis, MO 63110. 314/362-2418.

6 - 7 **Rheumatology** — Location: Missouri University School of Medicine, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MU School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

6 - 8 **Ozark Chest Conference: Lung & Heart/Lung Transplantation** — Location: Tan-Tar-A, Lake Ozark, MO. Contact: American Lung Association of Eastern Missouri, 1118 Hampton Avenue, St. Louis, MO 63139-3196, 314/645-5505. Or American Lung Association of Western Missouri, 2007 Broadway, Kansas City, MO 64108. 816/842-5242.

9 - 10 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

12 - 14 **Issues in Black Health Care** — Location: Adams Mark Hotel, Kansas City, MO. Contact: Barry Kling, Missouri University School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

13 **ICU Nosocomial Infections: We CAN Make a Difference** — Location: Research Medical Center, Kansas City, MO. Contact: Turner L. Minnigerode, M.D., Research Medical Center, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

13 - 14 **Alumni Weekend** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

14 - 15 **Pediatric Advanced Life Support Course:** Location: St. Louis Children's Hospital, St. Louis, MO. Contact: Margo Long, CME Services, St. Louis Children's Hospital, 400 South Kingshighway, St. Louis, MO 63110. 314/454-6196 or 1-800-678-HELP.

18 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

18 **Marilyn Fixman Clinical Cancer Conference — Psychosocial Support of the Cancer Patient and the Cancer Survivor** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

18 - 19 **NIH Grants Seminar** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

18 - 27 **Allergy Abroad — Italy** — Location: Padua, Florence, Rome, ITALY. Contact: Loretta Giacoletto, Continuing Medical Education, Washington University School of Medicine, Box 8063, 660 South Euclid, St. Louis, MO 63110. 314/362-6891.

20 - 21 **Third Annual Symposium and Workshop on Operative Laparoscopy, Pelviscopic Surgery and Laser Endoscopy — "Advances, Complications and Controversies"** — Location: St. Luke's Hospital, Chesterfield, MO. Contact: Patty Fogerty, Program Coordinator, Department of Education, St. Luke's Hospital Institute for Health Education, 222 South Woods Mill Road, Suite 350 North, St. Louis, MO 63017. 314/851-6006.

20 - 21 **Pulmonary Medicine** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20 - 21 **1989 Cancer Symposium** — Location: Sheraton West Port Inn, St. Louis, MO. Contact: Jayma Mikes, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8854.

20 - 21 **Cancer Conference IV** — Location: Big Cedar Lodge, Table Rock Lake, MO. Contact: Jackie Hartman or Sarah Johansson, Greene County Medical Society, 1200 E. Woodhurst, D-200, Springfield, MO 65804. 417/887-1017.

23 **City-Wide Radiology Conference: Renal and Adrenal MRI** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

25 - 29 **Ethical Choices in the Age of Pervasive Technology — A World Conference** Location: University of Guelph, Ontario, Canada. Contact: Brian Segal, President, Division of Continuing Education, Room 160, Johnston Hall, University of Guelph, Guelph, Ontario, Canada N1G 2W1. 519/824-4120, ext. 3956 or 519/824-4747, ext. 3957. FAX 519/767-0758.

November

2 - 3 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

2 - 4 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis MO. Contact: Elaine Thompson St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

2 - 4 **Kansas City Southwest Clinical Society - Annual Fall Clinical Conference** — Location: Park Place Hotel, Kansas City, MO. Contact: Linda F. Smutz, Executive Director, 7920 Ward Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

3 **Eighth Dr. Richard A. and Betty H. Sutter Visiting Professorship in Occupational and Industrial Medicine: "Imaging Occupational Trauma: Acute and Chronic"** — Location: Scarpellino Auditorium, Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: Julie A. Jackovich, Mallinckrodt Institute of Radiology, Washington University Medical Center, 510 South Kingshighway, St. Louis, MO 63110. 314/362-2866.

3 - 4 **Obstetrics - Gynecology Update 1989** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Sue Dunkin, MU School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

3 - 5 **Microsurgery of the Lumbar and Cervical Spine** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

6 - 11 **Microsurgery of the Cranial Base** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

9 **New Advances in the Management of Pediatric Infections** — Location: The Hyatt Regency/St. Louis Union Station, St. Louis, MO. Contact: Cathy Caruso, Continuing Medical Education, Washington University School of Medicine, Box 8063, 660 South Euclid, St. Louis, MO 63110. 314/362-6893.

10 **High Risk Obstetrics** — Location: Research Medical Center, Kansas City, MO. Contact: Gregory C. Starks, M.D., The Ed Bixby Institute for Postgraduate Medical Education, Research Medical Center, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

10 - 11 **Nd:YAG Operative Hysteroscopy/Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

10 - 12 **Sixteenth Annual Symposium: Anesthesia and The Geriatric Patient** — Location: The Marriott Pavilion Hotel, One Broadway, St. Louis, MO. Contact: Geriatric Symposium, Dept. of Anesthesiology, Box 8054, Washington University School of Medicine, 660 S. Euclid, St. Louis, MO 63310. 314/362-6973.

11 - 12 **Infectious Disease** — Location: Tan-Tar-A, Osage Beach, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

15 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

22 **Low Grade Non-Hodgkin's Lymphoma/Chronic Lymphocytic Leukemia** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

December

1 - 2 **17th Annual Diabetes Symposium: Current Topics in Diabetes for the Practicing Physician** — Location: Hyatt Regency, St. Louis Union Station. Contact: Jeanne Rogers, Kilo Diabetes & Vascular Disease Research Foundation, 1227 Fern Ridge Parkway, #100, St. Louis, MO 63141. 314/434-6500.

1 - 3 **Cardiovascular Medicine Legal Environment: Medicine's Response** — Location: San Diego Marriott and Marina, San Diego, CA. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

2 **Modulating the Immune Response to Benefit the Patient** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 9 **The Head Injury Patient: Advances in the '80's** — Location: Hyatt Regency at Union Station, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

YOCON®

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

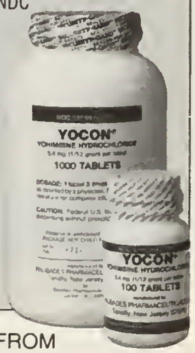
Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES
PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.**, P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Eli Lilly 682

Forrest T. Jones 688

Fred S. James 712

Intrav 680

Jackson & Coker 699

Key Pharmaceutical 699, 700

Medical Defense Associates 704

Medical Protective Company 717

Merck, Sharpe, & Dohme 723, 724

MOMEDICO 670

Omaha Mid-West Clinical 698

Palisades Pharmaceuticals 715

PIE Mutual Insurance Company 722

Professional Data Services 709

Prudential-Bache Securities 672

Risk Control Associates 683, 684

Roche 711

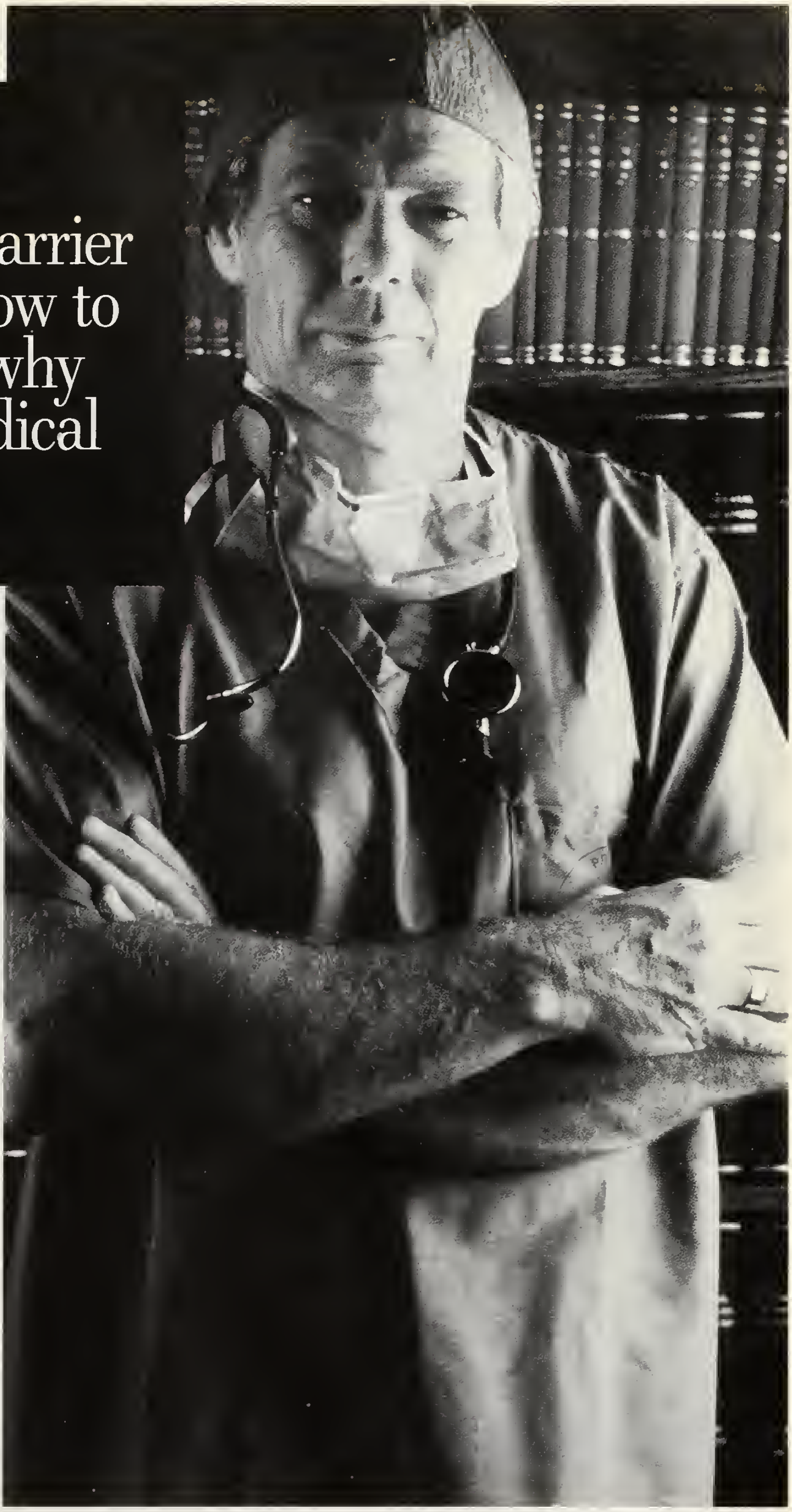
Strategic Care 674, 718

Timberlawn Psychiatric Hospital 703

United Missouri Banks 676

U.S. Air Force 698

Wes Woodbury 700



"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."

At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

America's premier professional liability insurer.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222
1-800-321-6726

Do you know how many new patients you're seeing?

Discover DISC SYSTEMS

Patient population is important to the bottom line. It is one of many financial and marketing indicators DISC Systems can relay to physicians on a daily, monthly, and annual basis so you can make timely business decisions.

DISC is endorsed by three medical societies because it has increased efficiency and cash flow for hundreds of practices and thousands of physicians. It can do the same for you.

Every DISC System gives you the most up-to-date, user-friendly accounting capabilities and marketing information available specifically for the health care field. With DISC you have easy billing. Simple electronic claims processing. Flexible appointment scheduling. Excellent service and support.

In addition, DISC's custom reporting capabilities quickly detail marketing trends. So you'll always know how many new patients you have. And you'll be able to keep them healthy, while DISC keeps your business healthy.

A product of
StrategiCare™
INC.

4500 Main Street, Suite 900, Kansas City, Missouri, 64111
For more information, contact Carl Brandt, 800/331-4479

NCR DISC is an NCR Value-Added Reseller

Classifieds

Physicians Wanted

MISSOURI PRO SEEKS MEDICAL DIRECTOR. Position reports to Board of Directors and is responsible for administration of all PRO medical review activities statewide to ensure compliance with established objectives and contractual requirements. Duties include: supervision of physician staff, education of physicians/physician reviewers, monitoring medical review process, preparation and maintenance of physician reviewer manual, physician recruitment, meetings with groups of and individual physicians, serving as liaison with state and national physician organizations. Physician (M.D. or D.O.) required. Licensed, or able to be licensed, in Missouri. Experience with utilization and/or quality management, risk management, and administrative medical supervision. Considerable travel. Salary negotiable. Excellent fringes. Send resume to **MPCRF Search Committee,** 505 Hobbs Road, Suite 100, Jefferson City, MO 65109.

EMERGENCY MEDICINE IN IL AND MO – Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Thomas Mankiewich or Felicia Hershkowitz, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST – Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). For information contact: Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

FAMILY PRACTICE – HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hospital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar opportunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435; 612/835-5123.**

E.R. PHYSICIANS/PART-TIME – Liberty Healthcare Corp., a 12-year-old medical management corporation, has part-time positions available in moderate volume ERs in several facilities in the midwest. We offer competitive salary and paid malpractice. Shifts available to suit your particular schedule. We seek physicians with E.R. experience. If you are a 2nd-year EM resident, 3rd-year FP or IM resident, Liberty Healthcare can provide you with worthwhile, rewarding part-time career opportunities. For more information, call E.R. specialist, Annamarie Alleva, 1-800-331-7122 toll free or send C.V. to: **Liberty Healthcare Corp.,** Dept 0, 399 Market Street, Philadelphia, PA 19106. EOE.

ANESTHESIOLOGISTS NEEDED: Great opportunity for **two BE/BC anesthesiologists** to provide anesthesia services in rural community hospital one hour from St. Louis. Full backup available from St. Louis-based anesthesia group. Most facets of a challenging anesthesia practice including OB are available to satisfy every professional need. Those interested please send CV to: Western Anesthesiology Associates, Inc., 621 S. New Ballas Road, Suite 629, St. Louis, Missouri 63141.

SURGEON OPPORTUNITY. Immediate opening for general surgeon in rural Nebraska. Board certified or board eligible. Must be licensed in Nebraska. Excellent benefits. Great hunting and fishing. Wallace & Panzer, M.D., P.C., 807 N. Ash, Gordon, NE; phone 308/282-1164.

Kaiser Permanente - Kansas City
OB-GYN – BC/BE

Consider the advantage of affiliation with the Kaiser Permanente Program in Kansas City:

- Excellent Salaries/Benefits
- Fully Paid Malpractice Insurance
- Academic Affiliation with Two Tertiary Care Hospitals
- Student Loan Forgiveness Programs
- Malpractice Tail Coverage Considerations For Physicians Currently in Practice
- Family Oriented, Metropolitan Area

Send CV or call:

Larry V. McDonald, M.D.
6900 Squibb Rd., Suite 200
Shawnee Mission, KS 66202
913/384-9090

PRACTICE OPPORTUNITY. Rural Missouri FP currently being operated on part-time basis with excellent full-time possibility. Priced at less than potential one year gross. Includes building with attractive owner financing. Call or write: **Practice Support Resources,** 7001 N. Locust, Suite 202, Gladstone, MO 64118. 1-816/436-6119.

PHYSICIANS NEEDED: Family Practice – Internal Medicine; Oncology – Endocrinology; Neurosurgery – Neurology; General Surgery – Orthopedic Surgery. Group practice, solo, or urgent care settings available through our hospital network located in Macon and serving all of Middle Georgia. Your practice will be located 80 miles south of Atlanta, in a growing family-oriented community, where you can avoid traffic and enjoy a rewarding professional career. Please contact Stephen Wofford at 912/741-6283 for a confidential consultation or write: P.O. Box 4627, Macon, Georgia 31208.

Physicians Wanted

SOUTHEASTERN IOWA — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

EXCELLENT OPPORTUNITY for an internist to become associated with a 13-physician multi-specialty group located in St. Charles, Missouri. St. Charles is an excellent community to raise a family, excellent school systems, easy access to the St. Louis metro area for recreation, entertainment, with a general service area potential of 120-150,000 residents. Guaranteed first year with excellent fringe benefits and an established practice. Reply to **File #25**, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

MASON CITY, IA — Seeking full-time and part-time physicians for low volume 75-bed hospital emergency department. Great opportunity to assist to develop "state of the art" quality assurance and educational programs. Excellent compensation, paid malpractice insurance and full benefit package to full-time staff. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

FAMILY/ER — Physicians needed immediately to staff our group of walk-in out-patient clinics. No hospital call! Paid malpractice, profit sharing, $50 minimum per hour to start and potential to $120 per hour during busy shifts. Bonus for pilots. Call Sandy McBrayer at 601/328-2525, 8 a.m. to 5 p.m. Monday thru Friday.

PSYCHIATRIST — LINCOLN, NE — Join our team! The nation's largest health care system seeking BC/BE psychiatrist for VA Medical Center acute inpatient area. Must meet English proficiency requirements. Licensure any state. Full range of treatment programs including Mental Hygiene Clinic and Alcohol Treatment Unit. Comprehensive benefit package. Salary negotiable. Lincoln is a university town with small town atmosphere and metropolitan advantages. Lincoln is located in America's heartland and boasts a low cost of living. Videotapes of Lincoln and our facility available for review. Contact Dr. Whitla, 402/489-3802, Ext. 6630, or send CV to Dr. Whitla (116A), VA Medical Center, 600 South 70th Street, Lincoln, NE 68510. EOE.

INTERNIST-BC/BE, to practice quality medicine with good fellow staff. No need for malpractice insurance since covered by federal torts act. Good fringe benefits such as low cost life/health insurance, 30 days vacation leave per year. Staff vacancy at VAMC Poplar Bluff, MO, located in SE Missouri Ozark foothills. Community of 20,000 with low cost of living. Good schools, excellent outdoor recreational opportunities. Interested physicians should contact Chief, Medical Service or Chief of Staff, VA Medical Center, Poplar Bluff, MO 63901 or call 314/686-4151, ext. 201. EOE.

MISSOURI-MEDICAL CARE SERVICE DIRECTOR: Needed for 4-physician, 10-nurse and 6-support personnel occupational medical facility in Kansas City based manufacturing plant. Will direct and supervise all medical activities, including physical examinations, periodic check-ups, treatment of work-related injuries and illnesses. For detail information, please write: W. G. Dustin, Supervisor, Professional Placement, Allied-Signal Aerospace Company, Kansas City Division, 2000 East 95th Street, Kansas City, MO 64131. An Equal Opportunity Employer.

Position Wanted

RESIDENCY WANTED: Recent Graduate, University of Missouri-Columbia School of Medicine, desperately seeks PGY-1 training position, any specialty (primary care preferred). **Program Chiefs:** Please give me a chance. All replies confidential. Both M.D. and D.O. programs equally considered. Midwest preferred, but will consider relocating. Reply to: **File #24**, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Practice for Sale

FAMILY PRACTICE/OFFICE BUILDING FOR SALE. With equipment & furnishing in South St. Louis County; for immediate continuous practice, option to buy building. 1300 sq. ft. office space on approximately 1/2 acre lot with 15-car parking lot. Price negotiable. Send inquiry to: **Midwest Management**, P.O. Box 31516, St. Louis, MO 63131.

FOR SALE, GENERAL PRACTICE, gross $200,000/year; 90% third party pay. Retiring after 40 years successful medical practice. Solo or group. Fully equipped brick medical building with income from rentals, also for sale, or rent with option to buy after 1 year. St. Louis Suburb, P.O. Box 5711, St. Louis, MO 63121.

BC/BE INTERNISTS AND FAMILY PRACTITIONERS

A balanced lifestyle, competitive income and freedom to practice quality medicine. Opportunities to join a unique primary care practice in the Chicago/St. Louis areas. Excellent financial package includes income guarantee, bonus incentive and potential for profit sharing. No billing or HMO headaches.

Send C.V. to:

Lori Jones
MedFirst Medical Management, Inc.,
5515 North Cumberland Avenue,
Suite 808,
Chicago, Illinois 60656.
Or call COLLECT: (312)774-3443.

MedFirst
Medical Management, Inc.
CHICAGO

PRIMEDICAL
Physician Care Centers
ST. LOUIS

Investment

$5,000-$60,000: FOR PHYSICIANS – Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Real Estate

BAILEY PROPERTIES, INC., is a statewide real estate and management company that deals exclusively in land and farm sales. Our goal is to bring willing land owners and interested land buyers comfortably together to maximize the financial, recreational, agricultural and other personal advantages that come with the ownership of rural properties. Call or write Bailey Properties for more information. **Bailey Properties, Inc.**, 6356 Clayton Road, St. Louis, MO 63117. 314-863-LAND.

Equipment for Sale

FOR SALE AT A SACRIFICE. 1) Three Ritter full power Proctology Tables; 2) One Wall or Push Cart Type Bantam Bovie Electrocautery; 3) An assortment of Proctological Instruments. Excellent Condition. Very Reasonably Priced. Telephone: 314/335-8725.

FOR SALE: Konica Medical Imaging Film processor, Model QX-70; Like new. Original cost $5,000. Will sell for $3,500, including delivery; Moving, no room for this unit. Contact: Dr. Robert Day, 816/232-8188.

Practice Opportunity

PRACTICE OPPORTUNITY to begin new or satellite office in central St. Charles. Low flat rent includes large private office, all utilities, phone and receptionist in large multidisciplinary clinic. Active patient base for doctor immediately available. Office opens 9/1/89. Call Dr. Levin, 314/947-7725.

MISSOURI

Emergency Medicine or Family Practice Opportunities

Family Practice — St. Louis: Join 15 member physician group providing coverage for five clinics. BC/BE FP with experience in female medicine. Hours Monday through Friday.

Emergency Medicine — Near Kansas City: Located one hour from Kansas City. Emergency Department staff position. ED volume 8,000 annually.

All independent contract physicians with Spectrum are offered:

- a guaranteed competitive rate of reimbursement
- occurence malpractice insurance coverage
- allowance for CME, professional dues and relocation expenses

For complete information, contact:

Mary Dwyer
Spectrum Emergency Care, Inc.
P.O. Box 27352
St. Louis, MO 63141
1-800-325-3982, ext. 3031

This publication is available in microform.

University Microfilms International

300 North Zeeb Road
Dept. P.R.
Ann Arbor, Mi. 48106
U.S.A.

30-32 Mortimer Street
Dept. P.R.
London W1N 7RA
England

WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, PIE Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality. PIE Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

Physician Managing Boards, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

Quality Rated Insurance Program: a modified claims-made plan which works in the physician's favor to reward loss-free physicians and provides added protection not available in other policies.

A Financially Sound Reinsurance Program with Lloyd's of London, the world's most prestigious reinsurer.

An Aggressive Defense Team, experienced in all types of medical liability claims and willing to fight for your cause.

If your standards match ours, let's talk business.

The PIE Mutual Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth St., Cleveland, OH 44114
(216) 781-1087

SO WE CAN HOLD THE PREMIUMS DOWN.

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410
(800) 821-5401

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

VASOTEC®

(ENALAPRIL MALEATE | MSD)

VASOTEC is available in 2 5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms Angioedema associated with laryngeal edema may be fatal **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics. heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident

If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered

Precautions: *General. Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials In most cases these were isolated values which resolved despite continued therapy Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia Patients should be told to report promptly any indication of infection (e g , sore throat, fever) which may be a sign of neutropenia

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions.

Hypotension. Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION)

Agents Causing Renin Release. The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents. methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but *not* at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters

There are no adequate and well-controlled studies of enalapril in pregnant women However, data are available that show enalapril crosses the human placenta Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate It is not known whether this drug is secreted in human milk Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use. Safety and effectiveness in children have not been established

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were. headache (5.2%), dizziness (4 3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1 4%), nausea (1.4%), rash (1 4%), cough (1 3%), orthostatic effects (1.2%), and asthenia (1.1%)

HEART FAILURE The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1 8%), headache (1 8%), abdominal pain (1 6%), asthenia (1 6%), orthostatic hypotension (1 6%), vertigo (1 6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1 3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category

Cardiovascular. Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest, pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric. Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia

Urogenital. Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin. Herpes zoster, pruritus, alopecia, flushing, photosensitivity

Other. Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0 2%). Angioedema associated with laryngeal edema may be fatal If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately (See WARNINGS.)

Hypotension. In the hypertensive patients, hypotension occurred in 0 9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2 2% of patients Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure (See WARNINGS)

Clinical Laboratory Test Findings.

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1 2% of patients

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1 0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0 1% of patients discontinued therapy due to anemia

Other (Causal Relationship Unknown) In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred

Dosage and Administration: *Hypertension.* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed

If the diuretic cannot be discontinued, an initial dose of 2 5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval In such patients, an increase in dosage or twice-daily administration should be considered If blood pressure is not controlled with VASOTEC alone, a diuretic may be added

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS)

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL) For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2 5 mg once daily The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis The recommended starting dose is 2.5 mg once or twice daily After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses The maximum daily dose is 40 mg Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2 5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d , then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is *not* excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486.

J6VS18R2(817)

MSD
MERCK
SHARP&
DOHME

IT MAY CHANGE THE WAY YOUR PATIENTS FEEL ON ANTIHYPERTENSIVE THERAPY

MSD
MERCK
SHARP&
DOHME

FOR MANY HYPERTENSIVE PATIENTS
START WITH ONCE-A-DAY
VASOTEC®
(ENALAPRIL MALEATE | MSD)

For a Brief Summary of Prescribing Information, please see next page of this advertisement.

Copyright © 1987 by Merck & Co., Inc.

J6VS18R

Missouri Medicine

Journal of the Missouri State Medical Association

November 1989

[redacted]

PEPSI
WOODS GRO
PEPSI
CROSS ROADS
STORE
MERIT

You didn't go into medicine to become a human target.

Every day you put your reputation and practice on the line. And, with the increasing barrage of malpractice claims, your business has become a virtual firing line.

Now, you can do something about it. Protect yourself with MOMEDICO. We're the only physician owned professional liability insurance company founded and endorsed by the Missouri State Medical Association. MOMEDICO is a stock insurance company rather than a mutual assessable company. The overwhelming majority of our stock and policy holders are Missouri physicians.

At MOMEDICO we are proud of our reputation for highly trained and totally committed field service representatives. Our reputation for results is outstanding, too. Of all cases handled to conclusion, over 80% were closed without any payment of indemnity. So, if you find yourself on the firing line, MOMEDICO is the company that lines up to protect you.

MOMEDICO. . .the best company a physician can keep.

MOMEDICO

Better Protection. Together.

10795 Watson Road
St. Louis, Missouri 63127
314-965-1003 or
toll free 800-392-8039

Jefferson City Office
113 Madison
Jefferson City, MO 65101
314-634-8090

Kansas City Office
9229 Ward Parkway, Suite 290
Kansas City, MO 64114
816-363-6161

Founded by the Missouri State Medical Association

Contents

Missouri Medicine

Editor	Donald G. Sessions, M.D.
Associate Editor	Ramona M. Chapman, M.D.
Editor Emeritus	Jordan W. Burkey, M.D.
Managing Editor	Susan Flanigan Gold
Editorial Assistant	Valerie A. Peters

Editorial Board

Anesthesiology	Mark G. Zukaitis, M.D.
Cardiovascular Surgery	Jack J. Curtis, M.D.
Dermatology	Philip C. Anderson, M.D. John DeSpain, M.D. Ernest Lorenc, M.D.
Emergency Medicine	David M. Trantham, M.D.
Family Practice	William D. Bradshaw, M.D. Carl R. Kruse, M.D. Kirby L. Turner, M.D.
Gastroenterology	Jay P. Marshall, II, M.D.
Hematology	William H. Crosby , M.D.
Internal Medicine	John S. Daniels, M.D. Stephen Hamburger, M.D. Robert K. Skillman, M.D.
Neonatology	Elizabeth J. James, M.D.
Neurosurgery	Keith Rich, M.D.
Obstetrics and Gynecology	James Daly, M.D.
Oncology	Michael C. Perry, M.D.
Ophthalmology	John C. Hagan, III, M.D. F. Thomas Ott, M.D.
Orthopedics	William P. Thorpe, M.D.
Otorhinolaryngology	J. Regan Thomas, M.D.
Pathology	Scott A. Martin, M.D.
Pediatrics	R. Don Blim, M.D.
Physical & Rehabilitation Medicine	Paul E. Kaplan, M.D.
Plastic Surgery	Leroy Young, M.D.
Psychiatry	William F. Clary, M.D. J.C. Corvalan, M.D.
Radiation Therapy	MacDonald B. Logie, M.D.
Radiology	Donald R. Germann, M.D.
General Surgery	Mark S. Cotner, M.D. Richard O. Craig, M.D. Donald Silver, M.D. Michael Metzler, M.D.
Vascular Surgery	Kirt Nichols, M.D.
Urology	George M. Austin, M.D.

Publications Committee

Chairman	Donald G. Sessions, M.D.
Vice-Chairman	Ramona M. Chapman, M.D.
Members	Jack J. Curtis, M.D. John S. Daniels, M.D. Stephen Hamburger, M.D.

Cover

"**Wood's Grocery**," an 18" X 24" acrylic painting by **Henrietta Diehl** of **Fenton, Missouri.** The store, which stood for decades on the corner of Highway AT and H outside of Richwoods, Missouri, no longer stands. The main part of the building, with its store front and canopy removed, now serves as a food distribution center for the needy.

Guest Editorials

731 **Psychiatry's Identity Disorder**
William F. Clary, M.D., *Springfield, Missouri*

733 **Multimodality Therapy for Lung Cancer**
Michael C. Perry, M.D., *Columbia, Missouri*

Special Series

741 **Zidovudine**
William G. Powderly, M.D., *St. Louis, Missouri*

Scientific Articles

744 **Supraglottitis: A Simultaneous Presentation in a Parent and Child**
Jane Dice Reardon, M.D., and Lloyd C. Olson, M.D.
Kansas City, Missouri

746 **Management of Sequelae of Chest Irradiation**
Susan J. Shapiro, M.D., and Carlos A. Perez, M.D.
St. Louis, Missouri

751 **Exercise Capacity Following Pulmonary Rehabilitation in the Elderly**
Michael L. Corriveau, M.D., F.A.C.P., Barbara J. Rosen, R.N., B.S.N., and Gerald F. Dolan, M.D.
Columbia, Missouri

Departments

735 Editor's Desk
737 Auxiliary Message
739 Practice Management
759 CME
765 New Members
767 Medical School News
771 In Memoriam
772 Information for Contributors
772 Advertising Index
775 Classifieds

GREAT EXPECTATIONS.

Tax-exempt investments to meet your high standards.

You've set high standards for yourself as a professional. You should expect the same high standards from your investment officer.

In helping you build a portfolio that meets your investment goals, your investment officer should combine fresh ideas with proven, top-quality investment recommendations, especially when considering tax-exempt municipal bonds.

Of course, the quality of municipal bonds varies as much as the municipalities that issue them. So your investment officer should be knowledgeable in selecting bonds that meet only the highest standards.

You expect your investments to position you for a prosperous future. Be sure you have the right information today.

United Missouri is *The Information Bank.* Any questions?

UNITED MISSOURI BANK

Member FDIC

P.O. Box 419226, Kansas City, Missouri 64141-6226 816-556-7200
P.O. Box 1126, St. Louis, Missouri 63188 314-621-1000

Missouri Medicine

Vol. 86, No.11 *Journal of the Missouri State Medical Association* November 1989

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

NOV 10 1989

MSMA PHONE BOOK

Missouri State Medical Association	314/636-5151
FAX	314/636-8552
American Medical Association	312/645-5000
MSMA Physicians' Health Program	314/768-4990
MOMEDICO	1-800-392-8039
Dodson Insurance Group	1-800-825-3760
Forrest T. Jones	1-800-892-7272
Fred S. James	KC 1-800-892-7105 St. Louis 1-800-445-9513
Health Care Financing Administration	816/426-5233
INTRAV	314/727-0500
Medicaid Provider Relations	1-800-392-0938
Medicare Provider Relations	1-800-392-3070
Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
Missouri Department of Health	314/751-6400
Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	(Preadmission) 1-800-392-8060 (General info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs	314/751-8042
Missouri State Board of Registration of the Healing Arts	314/751-2334

MSMA Officers

President	Marvin A. Singleton, M.D., *Joplin*
President-Elect	Gary A. Dyer, M.D., *St. Joseph*
Secretary	Norman P. Knowlton, III, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Clarence A. Martin, M.D., *Joplin*
Vice President	Jack Kayes, M.D., *St. Louis*
Vice President	Barbara Buchanan, M.D., *Kansas City*
Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*
Vice-Speaker	James B. Wolfe, M.D., *Springfield*

Councilors

Dorothy D. Reister, M.D., *Shawnee Mission*, Chairman
Carol F. Williams, M.D., *St. Louis*, Vice Chairman

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *Florissant*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Peters*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A.J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Robert T. Gibbons, Jr., M.D., *Overland Park, KS*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Ms. Laura Carlson, medical student, *Kansas City*
Charles Barbee, M.D., *Columbia*
Charlene Prather, M.D., *Kansas City*

Vice Councilors

Robert Schaaf, M.D., *Gower*
Carl R. Kruse, M.D., *Palmyra*
Meredith C. Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Jay Yedlin, M.D., *Kansas City*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Ms. Lora Mills, medical student, *Columbia*
Paul Petruska, M.D., *St. Louis*
Carla Siegfried, M.D., *St. Louis*

AMA Delegates

Keith Ashcraft, M.D., *Kansas City*
Vernon Balster, M.D., *St. Louis*
George Bohigian, M.D., *St. Louis*
Walter German, M.D., *Springfield*
Melvin C. Kasten, M.D., *Cape Girardeau*
Robert R. MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*

Printing Office: The Ovid Bell Press, Inc., Fulton 65251
Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.
Subscription rates: $20 per year.
Second class postage paid at Jefferson City, Missouri and at additonal mailing offices.
Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

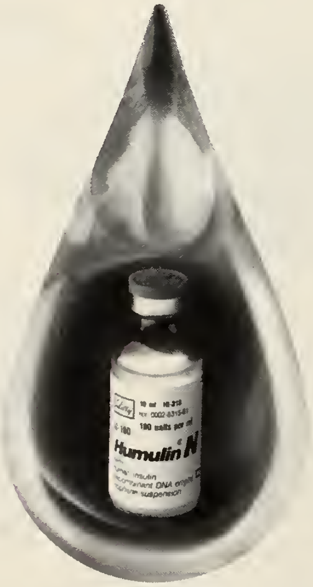
The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.
Copyright 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

For treatment of diabetes:

Introducing
Humulin® 70/30
70% human insulin isophane suspension
30% human insulin injection
(recombinant DNA origin)

REPLACE
Human Insulin

With Human Insulin



Humulin®
human insulin
(recombinant DNA origin)

Any change of insulin should be made cautiously and only under medical supervision.

Lilly

Leadership
In Diabetes Care

GUEST EDITORIAL

Psychiatry's Identity Disorder

by William F. Clary, M.D.

Much lip service has been paid to the need to integrate psychiatry, yet two paradigms continue to exist side by side in an uneasy alliance.

Nowadays, medicine seems to be the target of attacks from groups of all kinds. So it is baffling when one realizes that while the majority of physicians of the country are busied with trying to protect the interests of the medical field, a select group of physicians find themselves trying to resolve differences within their own medical specialty – psychiatry. This split serves as a detraction and makes the struggle facing physicians even more difficult. Before all physicians can pull together to work as a whole, the identity disorder of psychiatry must be resolved.

Before World War II, psychiatry busied itself with the classification of mental illnesses. The diagnostic categories of mental illness had prognostic implications. Schizophrenia had a worse prognosis than Affective Disorder and it was important to separate them. Regardless of diagnosis, psychiatric treatment at the time had little to offer, other than hospitalization. Sadly, patients often stayed years without much improvement.

After World War II, psychoanalysis, nurtured by the flight of refugees from Europe, became the predominant method of treatment for mental illness and emotional disorders in the United States. Psychoanalysis and its spin-off, psychodynamic psychotherapy, became widely believed to be the correct scientific explanation for the family of "mental" and "emotional" disorders.

Drug treatment was scarcely used during this time, and it was not considered to be as "pure" as psychodynamic psychotherapy. Many psychodynamic psychiatrists seriously doubted the merits of drug treatment. "Why mask the symptoms of emotional or mental disease with drugs, when what we are trying to uncover and correct is a core problem?", questioned many psychiatrists.

So, while psychoanalysis enjoyed the top spot, drug treatment struggled for respect. However, in 1953, Chlorpromazine, the first antipsychotic, appeared on the psychiatric treatment front. Advances in molecular neurobiology and studies of brain transmitter action, led researchers to the development of potent new drugs for the treatment of not only psychosis, but also affective disorders, panic disorders, obsessive compulsive disorder, phobias and other diseases. Psychoanalysis was found to be lacking in the treatment of the above mentioned disorders. With the introduction of an effective drug treatment, the groundwork was laid for the battle.

Now work on the biological components of personality structure has grabbed attention in the field. These advances in biological psychiatry have led to a scientific revolution analogous to the revolution described by Thomas Kuhn in his book, "The Structure of Scientific Revolution." This present revolution has divided psychiatry into two camps – the psychoanalytic in one camp and the biological psychiatrists in the other. Unfortunately, neither of the sides have resolved their differences. Several factors have contributed to this discord. The word neurosis is not used in the Diagnostic and Statistical

continued on page 736

Want to know who is referring to you?

Discover DISC SYSTEMS

DISC Systems' new **Market Master Series** software applications tell you who's referring patients to you in an instant—whether it's another doctor or Mabel from the cafeteria.

DISC is a full-service computer system developed exclusively for the financial and administrative functions of a medical practice.

Now we're introducing DISC's easy-to-use *Market Master Series*, a series of software applications to give doctors invaluable market and financial information on top of the usual day-to-day business applications you can expect from a system.

If you can't answer these questions, ask about DISC's *Market Master* applications:

- Who is referring to me?
- How can I ensure my patients will remember to schedule a follow-up exam?
- Should I consider opening a satellite?
- What is the distribution of insurance coverage among my patients?
- How can I manage my office schedule more effectively?

Market Master Series software applications answer these questions and more. With DISC you have the knowledge to control the future of your business.

A product of
StrategiCare®
INC.

4500 Main Street, Suite 900, Kansas City, Missouri, 64111
For more information, contact Carl Brandt, 800/TRY DISC (800/879-3472)

NCR DISC is an NCR Value-Added Reseller

GUEST EDITORIAL

by Michael C. Perry M.D.

Multimodality Therapy for Lung Cancer

Multimodality therapy may be the first step to unlocking the lung cancer puzzle.

The comprehensive review by Shapiro and Perez titled "Management of Chest Irradiation" on page 746 of this issue, does not address the issue of the *indications* for radiation therapy in lung cancer.

Under the new staging system there are now four stages of lung cancer, ranging from least advanced (Stage I) to metastatic disease (Stage IV).[1] Histologically, lung cancers are usually divided into small cell lung cancer and so-called non-small cell cancers (squamous cell, large cell, and adenocarcinoma). Most small cell lung cancer patients receive chemotherapy, and radiation therapy is reserved for patients with limited disease.

Of those patients with non-small cell lung cancer, most (but not all) patients with clinically-staged Stage I disease are candidates for surgery with a reasonable chance for cure (approximately 50% have five-year survival).[1] The prognosis for surgically treated Stage II patients is similarly good (approximately 25% have five-year survival), and radiation therapy is usually reserved for those patients who either cannot tolerate or have refused surgery that may require pneumonectomy.

Likewise, patients with metastatic disease are unlikely to benefit from radiation therapy except for palliation of local symptoms or treatment of painful metastases. The local symptoms usually considered amenable to radiation therapy include obstructive pneumonia, chest pain, hemoptysis, and the superior vena cava syndrome.

Stage III lung cancer is now subdivided into IIIA disease — considered potentially, surgically resectable and Stage IIIB — locally advanced, but *not* resectable. This is the group for whom radiation therapy is most often advocated. How effective is radiation therapy in this setting? Dr. Perez and his colleagues have been among the leaders in this field and have helped to establish the currently used doses and schedules.[2] There are still many physicians who would not advocate radiation therapy in asymptomatic patients, since there is no clear evidence that survival is prolonged.[3] Chemotherapy, in more advanced disease, has also provided little benefit.

A recent Cancer and Leukemia Group B study of "neoadjuvant therapy" may provide a hopeful clue.[4] Neoadjuvant or protochemotherapy is defined as chemotherapy given as initial therapy, prior to any planned surgery or radiotherapy. Its theoretical advantages include treatment before the blood supply to the tumor is altered, and the possibility of shrinking the primary tumor and treating any micrometastases simultaneously. In this study patients with regional Stage III disease were randomized to receive chemotherapy with vinblastine and cisplatin for two cycles followed by radiation therapy, or radiation therapy alone. Although unpublished (except in abstract form), median survival was clearly superior in the combined modality program. The Radiation Therapy Oncology Group has recently initiated a study to confirm these results, with the addition of a third arm of multifraction-per-day radiation

continued on page 734

Guest Editorial

continued from page 733

therapy. It is clear that surgery is not possible for many lung cancer patients, and radiation therapy, although it may provide local tumor control, seldom produces cures. Chemotherapy alone is of little benefit. Multimodality therapy may be the first step to unlocking the lung cancer puzzle.

References

1. Mountain CF: A new international staging system for lung cancer. *Chest* 1986;89 (suppl):2255-2335.
2. Perez CA, Stanley K, Grundy G, et al: Impact of irradiation technique and tumor extent in tumor control and survival of patients with unresectable non-oat cell carcinoma of the lung: Report by the Radiation Therapy Oncology Group. *Cancer* 1982;50:1091-1099.
3. Brashear RE: Should asymptomatic patients with inoperable bronchogenic carcinoma receive immediate radiotherapy? NO. (Editorial). *AM Rev Resp Dis* 1978;117:411-414.
4. Dillman RO, Seagren SL, Propert K, et al: Protochemotherapy improves survival in regional non-small cell lung cancer (NSCLC) (Abstract) *Proc Am Soc Clin Oncol* 1988;7:195.

Editor's Note: *Dr. Perry, an oncologist, is Chairman of the Department of Medicine at the MU School of Medicine in Columbia. He is a member of the Editorial Board.*

WANTED: COVER ART

Missouri Medicine prides itself on its beautiful covers. The journal repeatedly receives compliment after compliment on its choice of cover art. You can help us to make sure that the tradition of creative covers for Missouri Medicine continues. In the past, we have featured photographs of subjects ranging from roses to animals, paintings of still lifes, scenery, flowers, buildings and more. If you have a photograph or a painting you would like to see featured on our cover, we want to see it! Send your art or photograph to: MISSOURI MEDICINE, 113 Madision, P.O. Box 1028, Jefferson City, MO 65102. We prefer that you send 35 mm color slides. Help us out — send us your art!

Progress Notes –

Your connection to the activities of the Missouri State Medical Association and the happenings on the legislative front and in the health care field that affect you and your practice. Look for it monthly in its new newsletter form from MSMA!

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

Drug and alcohol abuse are major cultural issues facing the people of our society today. Is it a reasonable request that physicians agree to be tested for these abused substances?

Being Tested

Doctors are no strangers to being tested. During twenty plus years of formal schooling, being tested becomes a way of life. For me the culmination of this process was taking the examinations that allowed me to practice medicine. Yet taking state boards and national boards and specialty boards were almost anticlimactic after a lifetime of exam taking. Somehow we knew that we were prepared to be tested — we knew the material; we knew how to take exams; we had a confidence born of youth and inexperience.

Being tested is an interesting phenomenon. A test is described as an examination or a trial to prove the value or ascertain the nature of something. For testing to occur there is an implied or obvious standard by which the quality of something is measured. A test is characterized as a set of questions, problems, or exercises for determining a person's knowledge, abilities, aptitude, strength, and endurance. Being tested is an assessment of quality in a specific domain and in comparison with a specific set of standards.

What does it mean for a doctor to be tested? What is the specific domain of a doctor? What are the standards of action for a doctor that both physicians and the community can agree upon are required for the community to allow a doctor to practice medicine? Why do people go to doctors anyway?

Doctors are tested daily in the domains of medicine and in their interactions with people. The specific standards of assessing medical practice are grounded in the historical discourse that medicine is. People go to medical doctors because they expect that the interventions recommended by these doctors will take care of their medical concerns. Presently there are major breakdowns in how doctors are assessed by patients. One of the most obvious domains of breakdown is in the area of trust. Patients arrive in the office for second and third opinions in a conversation of distrust. This is increasingly common.

Recently I was talking to a surgeon who had been chief of staff at a community hospital. He said that an "expert" had given a talk to his hospital staff a year or two ago and had made the claim that 10% of the medical staff had either drug or alcohol substance abuse problems. He said that there had been a lively discussion and that although they all agreed that there were probably two doctors who might fit into that category, certainly there were not the suggested 7.5 troubled physicians. What he thought was of great interest was that over the next year the hospital and the medical staff were able to identify eight doctors who were impaired by drug or alcohol abuse.

This narrative creates an interesting dilemma for those of us who practice medicine. If one in ten of us is either alcoholic or addicted to drugs, it is a major medical as well as an ethical issue. No one would agree that it is acceptable for someone impaired by drug and alcohol abuse to be practicing medicine. The standard for both doctors and the community here is absolutely clear. Whose responsibility is it to

continued on page 736

Guest Editorial

continued from page 731

Manual (DSM) of 1980.[2] This omission irritates psychoanalytic psychiatrists. DSM-III and DSM-IIIR develop rigid criteria for diagnosis of disease, which is helpful in research design, but galling for psychodynamic psychiatrists.

These two approaches to the mind must be resolved for psychiatry to advance and become completely unified. Psychoanalytic and psychodynamic psychiatrists still recommend that treatment of mental illness should not be soiled with drugs. They claim biological psychiatrists neglect to address their patient's personal lives; they criticize the biological approach, saying it is reductionistic and takes away some of the humaneness associated with affects and feelings. Biological psychiatrists criticize psychodynamic psychiatry saying there is a lack of standardization and research design in the camp. The biological psychiatrists also lay claim to the fact that outcome studies have been hazy to say the least.

The solution to the controversy must involve a movement toward biological psychiatry by psychodynamic psychiatrists. They must prescribe medication and deal with transference and countertransference involved in prescribing medication. If they are unwilling to do this, they should refer many patients that they are seeing to psychopharmacological psychiatrists for treatment. The biological psychiatrists also need to become familiar with psychodynamic concepts and treat the patient as a total individual rather than a container of various illnesses classified in the DSM-III. Patients are, of course, the naive victims of the identity crisis in the field of psychiatry. When they see a psychiatrist, patients should be informed about the psychiatrist's belief system.

Much lip service has been paid to the need to integrate psychiatry, yet two paradigms continue to exist side by side in an uneasy alliance. After ten years of watching the developments in psychiatry, it is obvious to me that the interchange and the resolution of the conflict has not yet occurred. ■

Further Reading

1. Kuhn T: *The Structure of Scientific Revolution,* ed 2. Chicago, University of Chicago Press, 1970.

2. Diagnostic and Statistical Manual of the American Psychiatric Association, III. 1979.

Editor's Desk

continued from page 735

identify and treat these people? Is it the responsibility of the individual physician, individual patients, the hospital staff, the hospital administration, or the city and county medical societies? Or is it the responsibility of the State Board of Registration for the Healing Arts, risk management companies, insurance companies or patient consumer groups?

The history of the medical community's ability to handle uncomfortable problems like this has not been exemplary. Usually we speak on the side of the "good" and wait for others to intervene so we can react. In regard to being rigorous in being free of drug and alcohol abuse doctors can assume a leadership role. Drug and alcohol abuse are major cultural issues facing the people of our society today. How can a once-revered profession fail to take a strong personal and corporate stand against the abuse of drugs and alcohol?

Here there is a possibility to act as an organization in an anticipatory manner. It is not an abridgement of our basic constitutional autonomy to voluntarily request that we be tested for these substances on an intermittent and ongoing basis. If a test program were set up with integrity and honesty, who would not be willing to participate? This could be a solid statement to the community: Here is a group of individuals that you can count on as being worthy of your trust in this domain. Here is a group of professionals willing to be tested. ■

Auxiliary Message

by Barbara Gentry
MSMF Chairman

The Invest in Missouri Program was developed this year to raise funds for the Missouri State Medical Foundation. Your support of this endeavor is crucial.

Getting What You Pay For

If it is true that "you get what you pay for," then medical students must be getting a super education. Annual tuitions in Missouri's four medical schools range from $7,000 to $18,000. Another shocking statistic from Missouri State Medical Foundation (MSMF) applicants indicate student loan debts of up to $120,000!

MSMF has already received 94 applications for $185,000 in student loans for the 1989-90 school year. More than 2600 loans have been granted to deserving medical students attending AMA-accredited universities throughout the nation since the program began in 1960.

A new endeavor for raising MSMF funds called the Invest in Missouri Program was developed this year. The program briefly works this way: a minimum $5,000 investment is required. The money is used to buy an insurance annuity that will provide an annual check during retirement and an immediate, partial tax deduction. The remainder is given to the Foundation for loans or scholarships.

Current MSMF interest of 4% during medical school and 10% afterward is reasonable but it still adds up quickly for those students who have incurred large student loan debts. The AMA states that today's medical student graduates with an average debt of $35,000. If the Invest in Missouri Program and other fundraisers that benefit MSMF are successful, no-interest loans or scholarships can be awarded by the Foundation in future years.

Student loan recipients in the past have proven their integrity; the MSMF default rate is low — maybe 1%.

Do plan to participate in the Invest in Missouri Program and include MSMF on your extremely worthwhile contributions. It is an investment in Missouri's medical future. ■

Integrity.
Yours, and
Ours.

Financial soundness.
Yours, and
Ours.

The future.
Yours, and
Ours.

Medical Defense
Associates

P.O. Box 3817
Springfield, MO 65808-3817
(800) 492-7212
(417) 887-3120

MEDICAL PROFESSIONAL LIABILITY INSURANCE

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

Although your name will not be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.

Dear Dr. Woerth,

Many of our Medicare patients are surprised when they receive a statement for the remaining 20% of their bill not covered by Medicare. I am curious, is it common practice in other medical offices to write-off this 20%?

Dr. M.N.

Dear Dr. M.M.,

It is fairly common in some medical offices to write-off the 20% not covered by Medicare. But, physicians who do this will eventually find the usual and customary fee on their physician profile is lowered. Here is an example of how this can happen. If you bill $100 for a service and Medicare allows $100 for that service, Medicare will pay 80% of the allowable or in this case, $80. The patient is responsible for paying the remaining 20% or $20 of the allowable and it is recommended that you bill the patient for this amount. If you do not bill the patient and accept the $80 received from Medicare as payment in full, you are in essence indicating that your acceptable fee for this service is $80 and not the $100 billed to Medicare. Should you accept Medicare's payment of $80 as payment in full for this service on the majority of your Medicare patients, Medicare would lower your usual and customary fee from $100 to $80. As a consequence, your reimbursement from Medicare would be lowered from 80% of $100 to 80% of $80 or $64.

Dear Dr. Woerth,

Have you any suggestions on determining how much raise to give an employee? I generally give all my employees the same annual percentage increase but am unhappy with this method.

Dr. T.F.

Dear Dr. T.F.,

I believe raises should be based, at least in part, on merit. This means that each employee needs to be evaluated annually on his/her performance. Check with your public library for books about office management. Many of these texts include objective employment forms that can be easily adapted for use in the medical office. Most are quick and easy to use while providing the evaluator with a point system on which to rate and compare employees. You may want to continue giving your employees annual percentage increases but, rather than give everyone the same percent increase, you could vary the percent increase based on the rating the employee receives using one of these evaluation forms.

If you still find that it is easiest to give all employees the same annual percent increase in salary, you could reward outstanding employee performance with an occasional bonus.

■

BE AS GREAT AS GALVANI WITHOUT LETTING YOUR BUSINESS SUFFER.

Luigi Galvani de Bologne, 1737-1798, was a great scientist and surgeon, but he died poor. *StrategiCare* could have helped him adopt practice management strategies to make him a sound businessperson, too.

Dubbed "the frog dancing master," Galvani discovered that touching the legs of a frog with a metal instrument during a thunderstorm caused the muscles to contract. Today he is known as one of the founders of electricity, but during his life he was deemed eccentric. Toward the end he was forced to lean on his last few friends for financial assistance.

StrategiCare's integrated products and services for the business-side of health care could have maximized his profits, without taking treasured time away from his primary pursuits.

We've integrated the essential aspects of business to help physicians achieve success in both health care and in business.

Luigi Galvani, one of the founders of electricity.

BUSINESS DEVELOPMENT • BUSINESS FORMS • COMPUTER SYSTEMS
FURNISHINGS AND DESIGN • MANAGEMENT SERVICES • PERSONNEL SERVICES

Bringing Business Solutions to Health Care

StrategiCare®
INC.

4500 Main, Suite 900 • Kansas City, Missouri 64111
For more information, contact Theodore Boesen, 816-932-5357 or 800-879-1879

SPECIAL SERIES

Zidovudine

William G. Powderly, M.D.
St. Louis, Missouri

Zidovudine, or azidothymidine (AZT), is the only drug currently approved for treating patients with HIV infection. Though it effectively inhibits the disease, the drug's use is associated with a number of side effects, some grave. Management of zidovudine therapy and its side effects is highlighted. This is the third article in a series from the Washington University AIDS Clinical Trials Unit.

Zidovudine, also known as azidothymidine or AZT, is the mainstay of specific therapy for patients with HIV infection. It is currently the only approved drug for the treatment of HIV infection and its use has recently been expanded from patients with AIDS or advanced ARC to *all* HIV-infected patients (regardless of symptoms) who show laboratory evidence of immunodeficiency, that is, a T4 lymphocyte count below 500 cells/mm^3. Because of this, AZT will be increasingly used in primary care. This article focuses on the use of this drug and offers guidelines for management of the common side effects.

Mode of action

Zidovudine, 3'-azido-2',3'-dideoxythymidine, is a nucleoside analogue that inhibits the replication of HIV by acting at the level of reverse transcriptase. Human Immunodeficiency Virus is an RNA virus. Reverse transcriptase is a viral enzyme (a DNA polymerase), which HIV uses to make a DNA copy of the viral RNA, and then a second DNA copy so that the viral information can exist as double-stranded DNA and thus be integrated into the host cell's chromosome. This viral enzyme is much more sensitive to the effects of AZT than is cellular DNA polymerase, but inhibition of cellular enzymes may account for some of the toxicity associated with AZT use.

Clinical activity and indications

A large, multicenter, placebo-controlled study of AZT in the treatment of AIDS and advanced ARC was conducted in 1986 and showed that compared with placebo, AZT reduced mortality, morbidity and the incidence of opportunistic infections, as well as moderating weight loss and improving intellectual functioning. In addition, patients on AZT therapy had increases in their T4 counts and decreases in the level of HIV p24 antigen. This led to the termination of this study and the recommendation that all patients with AIDS or advanced ARC be treated with AZT. Further experience has shown clearly that AZT is not curative therapy. Improvements in T4 counts are not sustained (T4 levels usually revert to pretreatment levels after 16-24 weeks of treatment), and patients remain vulnerable to opportunistic infection. Serum p24 antigen levels may become positive again in some patients with prolonged AZT treatment, and a reduction in in-vitro sensitivity to AZT has been shown for some HIV isolates from patients who have been on treatment for a year or so. Furthermore, toxicity commonly limits the use of the drug. Despite this, AZT has clearly improved the quality, as well as the quantity, of life for many patients with AIDS or ARC.

More recently, AZT has been shown to benefit persons in earlier stages of HIV infection. Although not

Table 1
Major Side Effects of AZT

Nausea *(usually without vomiting)* — especially early

Headaches — especially early

Malaise, fatigue

Bone marrow suppression

Myalgias, myositis or myopathy — usually after several months

Confusion, encephalopathy *(rare)*

Seizures *(rare)*

Table 2
Management of Zidovudine-associated Bone Marrow Toxicity

Anemia:
Mild or stable (hemoglobin does not fall below 9.5 g/dL): continue AZT at 500 mg/day.
Severe (hemoglobin <7.5 g/dL): hold for 7-14 days, transfuse as necessary, resume at 500 mg/day.
Recurrent: transfuse as necessary, hold drug as needed, consider erythropoietin.

Granulocytopenia
Severe (neutrophil count < 1000/mm^3): Monitor closely with weekly CBC; if falls below 600/mm^3, hold AZT until recovery, resume at 500 mg/day.
Recurrent: Hold AZT as needed, consider 300 mg/day (although efficacy unproven) or alternative therapy.

yet published, two large multicenter studies conducted by the National Institutes of Health-sponsored AIDS Clinical Trials Group (ACTG) have clearly shown that AZT slows the progression of HIV-induced disease in patients with T4 counts less than 500 cells/mm^3. In a placebo-controlled study of 713 patients with early ARC (ACTG 016), 36 patients receiving placebo had developed AIDS or advanced ARC, compared with 14 patients receiving AZT. The mean duration of follow-up was nine months. In a similar study of asymptomatic HIV-infected patients (ACTG 019), the rate of progression to advanced disease for patients receiving AZT was roughly half that of patients receiving placebo. In both cases, an independent Data and Safety Monitoring Board recommended that the placebo arm be terminated and all patients receive AZT. On the basis of these studies, the NIH is now recommending that *all* HIV-infected patients with T4 counts less than 500 cells/mm^3 receive AZT. Studies of asymptomatic patients with T4 counts greater than 500 cells/mm^3 are continuing.

The dose of AZT that should be used is somewhat uncertain. Based on the initial studies in patients with AIDS, the currently approved dosage is 200 mg orally every 4 hours. However, a lower dosage, 100 mg orally every 4 hours while awake, was effective in treatment of asymptomatic individuals (ACTG 019). Furthermore, increasing experience with this dose in patients with AIDS suggests that it is effective and less toxic. Many physicians now prescribe the lower dose as the initial dose of AZT.

Toxicity management

AZT is a toxic drug, especially when used in patients with AIDS. In the initial studies as many as 50% of patients had serious side effects and indeed, in a recent study from France, only 21% of patients with AIDS who began taking 1200 mg/day of AZT tolerated this dose for six months. However, the toxicity of the drug seems to be less severe in patients with milder disease. The serious toxicity associated with AZT (500 mg/day) in the two ACTG studies of early disease was less than 5%. The expected toxicities of AZT are listed in Table 1. Nausea is a common initial problem, occurring in 5% to 10% of patients. It is usually most troublesome when patients first start taking the drug and is often reduced by taking the drug with food. Symptomatic treatment may be needed for a short time, but patients usually learn to tolerate the nausea, and it is rarely a lasting problem. Headaches are also a common initial complaint. Although HIV-related symptoms of fever, weight loss, and fatigue improve after AZT is started, some patients experience worse fatigue on AZT therapy. These patients may pose a considerable dilemma, because they feel the drug-related symptoms outweigh any potential benefit of the drug.

Myelotoxicity is by far the most important adverse effect of AZT. Because of this, patients on AZT should have a complete blood count with differential white cell count performed every two weeks for the first four months of therapy and then at least monthly. Both anemia and granulocytopenia are common and are particularly severe in patients with advanced disease, and whose bone-marrow function has already been impaired by infection or other drug therapy. Most patients taking AZT develop macrocytosis, and a high MCV is not of pathological significance in such individuals. A mild megaloblastic anemia is common and rarely needs treatment. Its etiology is unclear, and it does not respond to folate or vitamin B-12 supplementation.

Of more serious importance is marrow hypoplasia, which can result in either severe anemia, granulocytopenia or both. This appears to be due to a direct toxic effect of AZT on the marrow and may be severe and life-threatening. The management of this toxicity is summarized in Table 2. Because of the known benefits of AZT, the drug should be withheld only if the toxicity is severe, that is, in case of a hemoglobin less than 7.0 g/dL or a neutrophil count less than 600 cells/mm^3, and restarted when recovery has occurred. If the patient has been on high doses of AZT, therapy should be resumed at 500 mg/day. Unfortunately, toxicity usually recurs on re-exposure to the drug. Patients with recurrent anemia may be managed by transfusion. An alternative approach for anemic patients is to use erythropoietin, which is currently available for patients whose endogenous erythropoietin levels are low (i.e., less than 500 units). A dose of 300 mg/day may be attempted in patients with recurrent granulocytopenia; however, there are no data supporting the efficacy of such a dosage. Many such patients are unable to tolerate AZT at all and should be considered for trials with investigational antiretroviral therapy if these are available. Thrombocytopenia is an unusual reaction to AZT. Bone marrow biopsy can distinguish between the immune thrombocytopenia associated with HIV infection and decreased platelet production due to AZT.

As experience with AZT increases, new toxicities become apparent. Neurotoxicity (seizures, encephalopathy) has been reported rarely. Myositis or myopathy, which presents with muscle pain, tenderness or weakness, is an increasingly common problem and may be accompanied by profound wasting of one or more muscle groups. If an inflammatory component is present, CPK levels may be elevated. Patients with persistent complaints should have the drug withheld, as this syndrome may progress to severe paresis or acute rhabdomyolysis. Unfortunately, recurrences may occur when the drug therapy is restarted.

As the only available treatment for HIV-related disease AZT will be widely used in the next few years. Physicians are encouraged to become familiar with its use and particularly its side effects and to report any new toxicities that emerge.

Further Reading

Fischl MA, Richman DD, Grieco MH, et al: The efficacy of azidothymidine (AZT) in the treatment of patients with AIDS and AIDS-related complex. *NEJM* 1987;317:185.

Richman DD, Fischl MA, Grieco MH, et al: The toxicity of azidothymidine (AZT) in the treatment of patients with AIDS and AIDS-related complex. *NEJM* 1987; 317:191-197.

Creagh-Kirk T, Doi P, Andrews E, et al: Survival experience among patients with AIDS receiving zidovudine. Follow-up of patients in a compassionate plea program. *JAMA* 1988; 260:3009-3015.

Dournon E, Matheron S, Rozenbaum W, et al: Effects of zidovudine in 365 consecutive patients with AIDS or AIDS-related complex. *Lancet* 1988; ii:1297-1302.

Yarchoan R, Mitsuya H, Broder S: Clinical and basic advances in the antiretroviral therapy of human immunodeficiency virus infection. *Am J Med* 1989; 87:191-200.

The Author

William G. Powderly, M.D.

Dr. Powderly is clinical director of the AIDS Clinical Trials Unit in the Department of Medicine, Washington University School of Medicine St. Louis, Missouri.

Supported by PHS grant AI-25903.

Reprints not available.

Supraglottitis

A Simultaneous Presentation In A Parent And Child

Jane Dice Reardon, M.D. and Lloyd C. Olson, M.D.
Kansas City, Missouri

Supraglottitis, or epiglottitis, was once thought to be a disease solely of children. As this case report illustrates, however, the disease is appearing more frequently among adults.

Acute supraglottitis (epiglottitis) is a life-threatening disease characterized by sore throat, dysphagia, high fever and dyspnea which can rapidly progress to complete upper airway obstruction. The organism primarily responsible for supraglottitis is *Haemophilus influenzae* type b. Although once thought to be a disease solely of childhood, there has been an increasing recognition of supraglottitis in adults.[1] The following is a case report of the simultaneous presentation of a father and son with supraglottitis caused by *H. influenzae.*

Case Reports

Case No. 1

The patient was a 4-year-old white boy who had had mild upper respiratory symptoms for a few days before admission. On the evening of admission, he developed progressive respiratory distress and came to a community emergency room. His only immunizations were one injection of diphtheria-tetanus toxoid and one dose of inactivated poliovirus vaccine.

Physical examination revealed a 4-year-old in severe respiratory distress with pronounced stridor. His temperature was 38.4°C, pulse 174, and respiratory rate 42. His skin was dusky and he had perioral cyanosis. The lungs were clear and substernal and intercostal retractions were present. Findings of the remainder of the examination were normal.

The chest roentgenogram showed slight perihilar thickening. Laboratory studies revealed a white blood cell count of 36,400 cells per mm^3 with 80% segmented neutrophils and 10% band forms. The arterial blood gas showed a pH of 7.24, pCO_2 of 57, and pO_2 of 94 when the patient was breathing 15 liters per minute 100% oxygen by face mask.

The patient's respiratory distress worsened despite subcutaneous administration of epinephrine and intravenously administered steroids and diphenhydramine. He was taken to the operating room and found to have a red, enlarged epiglottis. The trachea was intubated and he was transferred to The Children's Mercy Hospital, Kansas City, Mo., for the remainder of his treatment.

The patient's blood culture grew beta-lactamase positive *H. influenzae* type b. He received a seven-day course of cefuroxime and a four-day course of rifampin. The trachea was extubated on the third hospital day, and the patient had an uneventful recovery.

Case No. 2

The 34-year-old father of the patient in Case No. 1 had been well until one day before admission, when he developed fever and malaise. He arrived at the community hospital emergency room with his son. The father related symptoms of dyspnea, the sensation of swelling in his upper airway, and mild hemoptysis, which had gradually increased in an eight-hour period.

Physical examination revealed him to be in acute respiratory distress with stridor. His temperature was

39.4°C, pulse 128, respiratory rate 16, and blood pressure 100/56. The oropharynx was mildly erythematous. There was no cervical lymphadenopathy. The lungs were clear, with decreased air movement, and mild retractions were evident. The remainder of the examination was unremarkable.

Radiologic studies revealed marked narrowing of the proximal trachea and enlargement of the epiglottis. Laboratory data showed a white blood cell count of 20,300 cells per mm^3 with 79% segmented neutrophils and 13% band forms.

The father's respiratory distress worsened despite subcutaneous administration of epinephrine. His trachea was intubated two hours after his son's.

Urine latex agglutination test was positive for *H. influenzae* type b. Blood cultures were not performed. The father was treated with ticarcillin and clavulanic acid. The endotracheal tube was removed on the second hospital day, and he had an uncomplicated recovery.

Discussion

The peak incidence of invasive *H. influenzae* disease occurs in the first two years of life; supraglottitis is an exception in that the peak age of occurrence is between 2 and 6 years.[2] There have been more than 300 case reports of supraglottitis in adults,[3] with an increasing number of cases in recent years. MayoSmith[1] reported an annual incidence of 9.7 cases per million adults. It may be that today's frequent use of antibiotics has allowed a significant proportion of the population to reach adulthood without developing antibodies against *H. influenzae*.[4,5]

A child with *Haemophilus* infection may spread this infection to other close contacts. Ward et al[6] studied patients with *H. influenzae* meningitis and found that household contacts of those patients had a 585 times greater incidence of *H. influenzae* meningitis than the age-adjusted risk in the general population. There was no systematic *H. influenzae* disease in 2,624 contacts who were older than 5 years of age. Similarly, Glode et al[7] reported an 800 times increased secondary attack rate in household contacts of children with Hib meningitis. None occurred in adults.

Glode et al[8] reported two secondary cases of supraglottitis in adults. The first case was in a 6-month-old girl with *Haemophilus* meningitis whose father developed supraglottitis five days after her diagnosis and whose grandfather then developed supraglottitis 26 days after the child's diagnosis. They also reported a 30-year-old woman with *Haemophilus* supraglottitis. A 30-year-old contact developed supraglottitis 17 days later, and a 14-month-old contact developed *H. influenzae* meningitis two months later.

The American Academy of Pediatrics currently recommends rifampin chemoprophylaxis for household contacts of an index case only when at least one of the contacts is younger than 48 months of age.[2] Because *Haemophilus* disease occurs in adults, some researchers have suggested broadening the recommendation to include all household contacts, regardless of whether there is a child younger than 48 months of age. Wershawski et al[9] reported five cases of supraglottitis in adults and commented that they administer prophylactic rifampin to all close contacts of adult patients with supraglottitis. Because supraglottitis is a rare disease in adults, the knowledge of recent contact with a person with invasive Hib infection could be important for early diagnosis and treatment. In this case report, the adult was afflicted at the same time as the child, and his illness could not have been prevented.

References

1. MayoSmith MF, Hirsch PJ, Wodzinski SF, et al: Acute epiglottitis in adults. *NEJM* 1986;314:1133-1139.
2. Committee of Infectious Disease, American Academy of Pediatrics: *Haemophilus influenzae* infections, in *1988 Red Book*, American Academy of Pediatrics, 1988, pp 204-210.
3. Skowronski GA, Love JB, Phelan DM, et al: Acute epiglottitis. *Med J Aust* 1984;141:133-134.
4. Norden CW, Callerame MD, Baum J: *Haemophilus influenzae* meningitis in an adult. *NEJM* 1970;282:190-194.
5. Weinstein L: Type B *Haemophilus influenzae* infections in adults. *NEJM* 1970;282:221-222.
6. Ward JI, Fraser DW, Baraff LJ, et al: *Haemophilus influenzae* meningitis: A prospective national study of secondary spread in household contacts. *NEJM* 1979;301:122-126.
7. Glode MP, Daum RS, Goldman DA, et al: *Haemophilus influenzae* type b meningitis: A contagious disease of children. *Br Med J* 1980;1:899-906.
8. Glode MP, Halsey NA, Murray M, et al: Epiglottitis in adults: Association with *Haemophilus influenzae* type b colonization and disease in children. *Pediatri Infect Dis J* 1984;3:548-551.
9. Warshawski J, Havas TE, McShane DP, et al: Adult epiglottitis. *J Otolaryngol* 1986;15:362-365.

The Authors

JANE DICE REARDON, M.D.
LLOYD C. OLSON, M.D.

Dr. Reardon is a pediatrician at the North Kansas City Hospital, North Kansas City, Missouri. Dr. Olson is chief of the Division of Infectious Diseases at The Children's Mercy Hospital, Kansas City, Missouri.

The authors wish to thank Drs. R. E. Draper and Carl Davis for their patient referral and assistance.

Reprints
Jane Dice Reardon, M.D.
Northland Pediatric Associates, Inc.
2700 Hospital Drive, Suite 350
North Kansas City, Missouri 64116

Management of Sequelae of Chest Irradiation

Susan J. Shapiro, M.D., and Carlos A. Perez, M.D.
St. Louis, Missouri

High-dosage irradiation is an important component in the treatment of patients with lung cancer. While most patients tolerate therapy well, certain changes can be expected in their bodies. The authors review these effects and offer suggestions for their management.

Lung cancer is the leading cause of cancer mortality in the United States. The National Cancer Institute's Surveillance, Epidemiology and End Results program estimated Missouri's 1988 incidence of lung cancer to be 3800.[1] A majority of these patients present with advanced disease and are treated with chest irradiation, either in the hope of cure or to alleviate or prevent localized symptoms. A randomized, prospective study by the Radiation Therapy Oncology Group (RTOG) has shown a tumor dose of 6000 cGy (rad) of irradiation to have a superior local tumor control rate of 67%, as compared to 54% in patients treated with 4000 to 5000 cGy.[2] Therefore, high doses of irradiation have been recommended and are being delivered to selected patients. Knowledge of the acute and chronic sequelae of this therapy is important for physicians because of the great number of patients treated. Fortunately, most patients tolerate radiation therapy extremely well, with most able to continue their activities even during their therapy. We present the spectrum of sequelae of the four major organ systems affected by this therapy (lung, esophagus, heart, and nervous system), as well as the effects on skin, bones, and subcutaneous tissues.

Skin

With modern technology, the skin reactions in patients undergoing irradiation are usually minimal and transient. This is due to the use of high energy x-rays (Co-60, linear accelerators) having a "skin-sparing effect," that is, the maximal amount of deposited energy is placed 0.5 to 3 cm deep into the skin instead of the previous x-ray orthovoltage units, which deposited most of the irradiation at the surface of the skin. Nevertheless, the skin receives moderate doses of irradiation, causing mild changes.

Acute Phase. During the course of irradiation, erythema of the skin occurs after approximately 3000 to 4000 cGy. This reaction is similar to a mild sunburn and lasts 2 to 3 weeks. Dry desquamation occurs soon after erythema, with pruritus and flaking of the skin. Aqueous ointments such as aquaphor or petroleum jelly applied twice daily will aid the symptomatic patient. Moist desquamation with vesicle formation and denuding of the epithelium is rare in lung cancer therapy. This reaction is similar to a second degree thermal burn and should be treated with frequent cleansing with diluted (1:10) hydrogen peroxide and topical antibiotic ointment to prevent infection. These lesions usually heal in 2 to 3 weeks. Epilation of chest hair is common and usually temporary, with regrowth of hair in 2 to 3 months. Sebaceous and sweat glands have the same range of radiosensitivity as hair follicles and temporary dryness occurs.

Chronic Phase. Upon completion of radiation therapy, hypo- or hyperpigmentation and skin dryness are common. With older technology, skin atrophy (thinning, permanent epilation, and telangiectasia) occurred frequently, but should be a rare phenomenon today.

Chemotherapy is being used as adjuvant therapy more commonly in patients with non-oat cell carcinoma of the lung and in virtually all patients with oat cell carcinoma. The additive or synergistic effect in the skin of irradiation and some chemotherapeutic agents was noted early. Adriamycin (doxorubicin) and actinomycin-D interfere with a cell's ability to repair sublethal damage from radiation, which inhibits healing of normal tissues between treatments. Also, D'Angio[3] described reactivation of radiation dermatitis when actinomycin-D was used following irradiation, a phenomenon termed "recall." Donaldson[4] described the recall phenomenon in patients receiving Adriamycin. Cassady[5] and Aristizabal[6] noted the recall phenomenon, but also observed the augmentation of radiation reactions of the skin when Adriamycin was given concurrently with irradiation. Aristizabal stated that if the interval between therapies was 3 to 5 days, similar reactions occurred as if the therapies had been given simultaneously. However, if treatments were separated by seven or more days, no augmentation was seen. Therefore, timing of these therapies has significant effect on normal tissue reactions and should be considered.

Subcutaneous Tissues and Chest Wall

Rarely, sequelae develop in the subcutaneous tissues or chest wall during or after receiving irradiation. In a few patients fibrosis develops and patients describe a "pulling" or "drawing" sensation of the chest wall. Fibrosis might also account for the occasional patient's having momentary, sharp pain sensations in the treated area. In these patients, the duration of symptoms occurs over just a few weeks. Reassurance is beneficial, as is obtaining a good history and possibly an evaluation to rule out cardiac disease. Although not previously described for lung cancer patients, rib fractures can occur spontaneously or with little trauma when the ribs receive high doses of irradiation.

Lung

This is a more significant and frequent sequela of thoracic irradiation. There are four phases of radiation-induced pneumonitis:

1) **Immediate**, which occurs during or within a few days of treatment completion. Inflammation causes mild edema, and patients are usually asymptomatic, although a dry cough may be present.

2) **Latent**, appearing 3 to 4 weeks after completion of irradiation. Most commonly, patients develop a nonproductive cough and low-grade temperature. Shortness of breath can occur even at rest. Radiographic studies show no pulmonary abnormality.

3) **Exudative**, may follow the latent phase and is accompanied by radiographic changes consisting of infiltrates almost always confined within the radiation portal. The alveolar cells detach from the basement membrane and form hyaline membranes. Cases of pneumonitis causing fatal adult respiratory distress syndrome outside the radiation portal have occurred, but these are rare. Fulkerson[7] described three patients who at autopsy exhibited interstitial fibrosis, Type II alveolar cell hyperplasia, inflammatory infiltrates, and squamous metaplasia.

4) **Fibrotic**, in which fibrosis develops to varying degrees. Irreversible radiographic changes are maximal at 12 to 18 months after the completion of radiation therapy.[8] Vascular changes can be demonstrated by nuclide ventilation-perfusion scanning. Goldman[9] described perfusion deficits within the irradiation portal in eight of 36 patients (22%) observed at least three months after radiation therapy. Associated ventilation defects are noted less frequently. Pulmonary function studies in lung cancer patients demonstrate small decreases in FEV_1 (19% predicted), forced vital capacity (23% predicted) maximal breathing capacity (16% predicted), and total lung capacity (10% predicted) in patients who have an FEV_1 of greater than 50% predicted before therapy.[10] This same study showed that patients who initially had an FEV_1 that was less than 50% predicted actually showed improvement (52% of patients) or minor decreases of less than 10% of initial value (37% of patients) in these same measurements. The diffusing capacity of carbon monoxide has been shown to decrease by approximately 15% of initial values.[11,12]

Management of pneumonitis is mostly confined to relief of symptoms. A nonproductive cough may be suppressed with antitussive medication, such as codeine-based compounds. In the presence of fever, it is critical to carry out fungal and bacteriologic studies to rule out superimposed infection and to administer appropriate antibiotics. With moderate to severe dyspnea, positive pressure oxygen administration might be necessary. Use of steroids is controversial. Some authors have reported improved respiratory function with steroids and others note exacerbation of pneumonitis with abrupt withdrawal.[13,14,15] Prednisone is most frequently used, at doses up to 60 mg/day. Patients usually require steroids for 3 to 4 weeks, but several months of therapy is not uncommon. To discontinue therapy, we recommend the dose be tapered at the rate of a 10 to 20 mg every 3 to 7 days, depending on symptoms.

Chemotherapy can cause an enhanced incidence of pneumonitis. Concomitant actinomycin-D has been reported to cause pneumonitis at lower doses of irradiation.[16, 17] Vershoore[18] reported an incidence of pneumonitis of 54% in patients treated with low-dose Adriamycin and irradiation. Einhorn[19] showed an increased incidence of pneumonitis when bleomycin is used concurrently (5 of 13 patients).

Esophagitis

Acute Phase. The effect of irradiation on the esophagus manifests as transient dysphagia or odynophagia usually beginning the third to fourth week of therapy. The dysphagia is described by patients as a "lump in the throat" sensation when swallowing. Occasionally, odynophagia is reported. The incidence of transient radiation esophagitis is dose-dependent. Hellman[8] described esophagitis in 12% of patients receiving less than 4000 cGy, 28% of those receiving 4000 to 5000 cGy, and 44% of those receiving 5000 to 6000 cGy. The reaction abates within 2 to 3 weeks after treatment is completed.

A soft or liquid diet during this phase is often the only therapy required. Liquid or tablet-form antacids (aluminum or magnesium hydroxide) every 2 to 3 hours decreases symptoms in many patients. Our patients suggest that hard candies or cough drops are soothing. Rarely, mucosal anesthetics (such as 2% solution of viscous lidocaine given 10 to 15 minutes before eating) or liquid analgesics are required to improve swallowing.

If the patient's nutritional status is compromised, weight loss can be averted using oral supplements, such as commercially sold milk shakes or instant breakfast packets dissolved in milk. If symptoms do not improve, insertion of a nasogastric tube or even a gastrostomy tube should be considered. If reactions are severe, the physician should suspect superimposed moniliasis, because ulcerated mucosa is particularly prone to this infection. If present, it can be treated with nystatin or ketoconazole.

Chronic Phase. Esophageal stricture rarely develops with radiation doses below 6000 cGy. RTOG trials demonstrate a 1.2% incidence of stricture requiring supplemental nutrition or gastrostomy at 6000 cGy, but only a 0.3% incidence at doses of 4000-5900 cGy.[20] In a study by Seaman[21] of 20 lung cancer patients who experienced radiation esophagitis, 55% of the cases were mild, 20% moderate, and 25% required dilation for a permanent stricture. If mild, no specific treatment is necessary. More severe strictures require dilation. In the exceptional case, more involved surgical procedures such as a bypass may be necessary.

The combination of chemotherapy with irradiation can result in an increased incidence of esophageal complications, particularly if the combination is given concurrently. Greco[22] described severe esophagitis in eight of 10 patients with oat cell carcinoma of the lung receiving cyclophosphamide, Adriamycin, and vincristine 2 to 5 days prior to initiating radiation therapy; four patients required supportive intravenous fluids and two patients developed stricture. With subsequent chemotherapy, the recall phenomenon occurred once in each of five patients and three patients experienced recall twice. Interestingly, if the Adriamycin was omitted, the recall phenomenon did not occur. Vinblastine doubled the incidence of esophagitis (14% to 30%) when used concurrently with irradiation as described by Coy.[23] Umsawasdi[24] described the development of esophageal stricture or fistula in 3 of 10 patients if irradiation was used concurrently with cyclophosphamide, Adriamycin, and Cis-platinum, versus an incidence of one in 45 if the treatment modalities were used sequentially in lung cancer patients.

Heart

Radiation-induced heart disease ranges from the asymptomatic to the fatal. The most common sequela is delayed pericarditis, which accounts for 92% of manifested abnormalities. Uncommon manifestations are acute pericarditis, accelerated coronary artery disease, valvular abnormalities, or myocardial disease.

Acute Phase. Acute pericarditis manifests as mild chest pain and possibly fever occurring during radiation therapy. This is a self-limited process that subsides promptly during continued irradiation with no ill effect. Analgesics are seldom required. Delayed acute pericarditis usually develops by 12 months, although cases have been reported up to several years after therapy. This entity is characterized by a chest pain and fever (as in the acute pericarditis) and a pericardial effusion. Typical findings are a pericardial friction rub, low voltage on an EKG, and enlarged cardiac silhouette on chest radiograph. Diagnosis is confirmed by ultrasound. Symptoms spontaneously resolve in half of the patients. Salicylates, indomethacin, or occasionally corticosteroids are used to relieve chest pain and fevers. However, tamponade may develop, causing pulsus paradoxus (>10 mmHg decrease in blood pressure during inspiration), Kussmaul's sign (distention of the jugular veins on inspiration), and right-sided heart failure due to increased intrapericardial pressure obstructing venous return. Pericardiocentesis is immediately necessary and frequently accomplished by subxyphoid tube drainage. Rabbit studies by Reeves[25] show early usage of methylprednisolone and ibuprofen to be beneficial for pericarditis.

Delayed chronic pericardial effusion rarely develops in asymptomatic patients. If it occurs, it is usually within the first year after radiation therapy.

Patients are usually asymptomatic and half of these cases spontaneously resolve, even after being present for 2 to 4 years. Constrictive pericarditis can develop after either the delayed acute pericarditis or delayed chronic pericardial effusion condition. Hemodynamic compromise appears as decreased cardiac output and elevated right heart pressures measured by cardiac catheterization. Associated manifestations are pleural effusion, dyspnea, and hepatomegaly. When constriction occurs, total pericardiectomy is required. Pericardial window procedures are not recommended by Palatianos[26] because further fibrosis will occur, and pericardiectomy will be more difficult to perform later. A 17% mortality occurred in this series of irradiated patients who developed constriction.

Myocardial fibrosis, a rare sequela of irradiation, is believed to be secondary to capillary damage.[27] Pancarditis consists of pericardial and myocardial fibrosis with or without endocardial fibrosis. Cardiac catheterization shows restrictive disease. This entity occurs in patients who have been retreated or have received large doses (>6000 cGy) of irradiation to the heart. Pericardiectomy does not help substantially, and patients have intractable cardiac failure.

Accelerated coronary artery disease is a suggested sequela of irradiation in many case reports. Boivin[28] performed a retrospective cohort study of mortality from coronary artery disease in patients with Hodgkin's disease. The relative mortalities were 2.1 for patients receiving irradiation versus 1.5 in those not receiving irradiation. Therefore, although irradiation has been implicated as a factor in accelerated coronary artery disease, the data are not conclusive.

Irradiation produces additive effects with Adriamycin's toxicity on the myocardium. Billingham [29] analyzed endomyocardial biopsies in patients receiving Adriamycin. When comparing pathologic changes in contractile elements and organelle degeneration in patients who received irradiation versus those who did not, irradiated patients had significantly worse changes.

Spinal Cord

Spinal cord injury may be a dramatic, severe complication of radiation therapy. Phillips and Buschke[30] outlined the criteria for radiation myelitis: The spinal cord should be in the radiation field; the main neurologic symptoms should correspond with the spinal segment irradiated; and myelography should rule out spinal cord compression from metastases.

There are four types of radiation injury to the spinal cord:

Subacute (Lhermitte's syndrome), consisting of a transient, abnormal sensation of bilaterally symmetrical electrical discharge down the spine and limbs upon neck flexion or extension. Onset is between 2 weeks to 7 months after completion of irradiation. Carmel[31] described this syndrome in 11% of patients receiving mantle irradiation for Hodgkin's disease. It has been proposed that oligodendroglia production of myelin is temporarily inhibited by the radiation. There is no correlation between the occurrence of Lhermitte's syndrome and subsequent development of myelopathy clinically or histopathologically.[32] Jones described seven patients whose symptoms lasted between two and 36 weeks. Reassuring the patient that this process is well-recognized and self-limited should be sufficient.

Motor neuron disorder syndrome is very rare and occurred in only five reported cases. The symptoms are flaccid weakness, atrophy, and fasciculations of the lower extremities. Deep tendon reflexes are diminished or absent, and sensory and sphincter function remain normal. This syndrome is slowly progressive with an onset three to eight months after irradiation. A residual neurological deficity of paresis occurs.

Acute transverse myelitis is extremely rare and is characterized by acute onset of paraplegia over hours to days. The latent period is usually two to five years. The pathogenesis is infarction of the spinal cord caused by radiation-induced vascular damage.

Chronic progressive radiation myelopathy accounts for most cases of permanent injury and occurs at 12 to 28 months after irradiation. Initially, a Brown-Sequard syndrome may occur, with a one-sided motor deficit and a contralateral sensory deficit. This progresses to partial or complete paralysis, sensory deficit, or both. Over a period of months, the neurologic deficit develops into spastic paraparesis; bowel and bladder dysfunction commonly occur. The cerebrospinal fluid protein may be elevated, with high myelin basic protein levels from the demyelinating process. Myelography or magnetic resonance imaging may show the spinal cord to be normal, atrophic, or swollen. The RTOG experience involved 877 patients receiving standard fractionation of irradiation with doses from 4000 to 6000 cGy. Only one patient developed myelitis. However, when 3600 cGy was given in six weekly fractions, myelitis developed in two of 108 patients.[33]

Treatment of radiation myelopathy is palliative. Respiratory therapy may reduce the probability of atelectasis or infection. Bladder catheter usage is required and obtaining periodic cultures of urine is indicated, since bladder infections may lead to sepsis and even death in these patients. Control of dysesthetic pain with carbamazepine and transcutaneous nerve stimulation (TENS) is quite helpful.

Rehabilitation, physical therapy, occupational therapy, family counseling, and disability compensation are important because these patients can live quite a long time. Dische[33] reported a 50% survival at two years cause a respiratory death. Patients with lumbar lesions live longest, dying of non tumor-related causes. Some authors have reported improved nerve function after repeated administration of hyperbaric oxygen to spinal cord injured patients.[34]

Patients fare quite well with radiation therapy. The temporary side effects are easily managed with minor alterations in a patient's lifestyle. Usually, only the patients who are considerably debilitated prior to therapy develop more intense acute side effects. Often the most difficult aspect of radiation therapy is the time patients must spend in travel to and from their daily treatments.

References

1. Silverberg E: Cancer statistics, 1988. *Ca-A Cancer Journal for Clinicians* 1988; 38:5.
2. Perez CA, Bauer M, Edelstein S, et al: Impact of tumor control on survival in carcinoma of the lung treated with irradiation. *Int J Radiat Oncol Biol Phys* 1986; 12:539.
3. D'Angio, GJ: Clinical and biological studies of actinomycin-D and roentgen irradiation. *Am J Radiology* 1962; 87:106.
4. Donaldson SS, Glick JM, Wilber JR: Adriamycin activating a recall phenomenon after radiation therapy. *Annals Int Med* 1974; 81:407.
5. Cassady JR, Richter MP, Piro AJ, Jaffe N: Radiation - adriamycin interactions: Preliminary clinical observations. *Cancer* 1975; 36:946.
6. Aristizabal SA, Manning MR, Miller RC, et al: Combined radiation - adriamycin effects on human skin. *Fron Radiat Ther Oncol* 1979; 13:103.
7. Fulkerson WJ, McLendon RE, Prosnitz LR: Adult respiratory distress syndrome after limited thoracic radiotherapy. *Cancer* 1986; 57:1941.
8. Hellman S, Kligerman MM, VonEssen CF, Scibetta MP: Sequelae of radical radiotherapy of carcinoma of the lung. *Radiology* 1964; 82:1055.
9. Goldman SM, Freeman LM, Ghossein NA, Sanfilippo LJ: Effects of thoracic irradiation on pulmonary arterial perfusion on man. *Radiology* 1969; 93:289.
10. Choi NC, Kanarek DJ, Kazemi H: Physiologic changes in pulmonary function after thoracic radiotherapy for patients with lung cancer and role of regional pulmonary function studies in predicting postradiotherapy pulmonary function before radiotherapy. *Cancer Treat Symp* 1985; 2:119.
11. Brady LW, Germon PA, Cander L: The effects of radiation therapy on pulmonary function in carcinoma of the lung. *Radiology* 1965; 85:130.
12. Hoffbrand BI, Gillam PMS, Heaf PJD: Effect of chronic bronchitis on changes in pulmonary function by irradiation of the lungs. *Thorax* 1965; 20:303.
13. Fryer CJH, Fitzpatrick PJ, Rider WD, Poon P: Radiation pneumonitis: Experience following a large single dose of radiation. *Int J Radiat Oncol Biol Phys* 1978; 4:931.
14. Castellino RA, Glatstein E, Turbo MM, et al: Latent radiation injury of lung or heart activated by steroid withdrawal. *Annals Int Med* 1974; 80: 593.
15. Rubin P, Andrews R, Paton R, Flick A: Response of radiation pneumonitis to adrenocorticoids. *Am J Radiol* 1958; 79:(3)453.
16. Phillips TL, Margolis L: Radiation pathology and the clinical response of lung and esophagus. *Front Radiat Ther Oncol* 1972; 6:254.
17. Wara EM, Phillips TL, Margolis LW, Smith V: Radiation pneumonitis: A new approach to the derivation of time-dose factors. *Cancer* 1973; 32:547.
18. Verschoore J, Lagrange JL, Boublil JL, et al: Pulmonary toxicity of a combination of low-dose doxorubicin and irradiation for inoperable lung cancer. *Radiother Oncol* 1987; 9:281.
19. Einhorn L, Krause M, Hornback N, Furnas B: Enhanced pulmonary toxicity with bleomycin and radiotherapy in oat cell lung cancer. *Cancer* 1976; 37:2414.
20. Perez CA, Azarnia N, Cox JD, Shapiro S: Sequelae of definitive irradiation in the treatment of carcinoma of the lung. Submitted for publication in *Proceedings of the First Agrigento International Conference on Imaging and Therapy of Lung Cancer,* Agrigento, Italy, May 16-21, 1988.
21. Seaman WB, Ackerman LV: The effect of radiation on the esophagus. A clinical and histologic study of the effects produced by the Betatron. *Radiology* 1957; 68:534.
22. Greco FA, Brereton HD, Kent H, et al: Adriamycin and enhanced radiation reaction in normal esophagus and skin. *Annals Int Med* 1976; 85:294.
23. Coy P: A randomized study of irradiation and vinblastine in lung cancer. *Cancer* 1970; 26:803.
24. Umsawasdi T, Valdivieso M, Barkley T, et al: Esophageal complications from combined chemoradiotherapy (Cyclophosphamide + Adriamycin + Cisplatin +XRT) in the treatment of non-small cell lung cancer. *Int J Radiat Oncol Biol Phys* 1985; 11:511.
25. Reeves WC, Cunningham D, Schwiter EJ, et al: Myocardial hydroxyproline reduced by early administration of methylprednisolone or ibuprofen to rabbits with radiation-induced heart diseae. *Circulation* 1982; 65:924.
26. Palatianos GHM, Thurer RJ, Kuiser GA: Comparison of effectiveness and safety of operations on the pericardium. *Chest* 1985: 88:30.
27. Fajardo LF, Stewart JR: Capillary injury preceding radiation induced myocardial fibrosis. *Radiology* 1971; 101:429.
28. Boivin JF, Hutchison GB: Coronary heart disease mortality after irradiation for Hodgkin's disease. *Cancer* 1982; 49:2470.
29. Billingham ME: Endomyocardial changes in anthracycline - treated patients with and without irradiation. *Front Radiat Ther Oncol* 1979; 13:67.
30. Phillips TL, Buschke F: Radiation tolerance of the thoracic spinal cord. *Am J. Radiology* 1969; 105:659.
31. Carmel RJ, Kaplan HS: Mantle irradiation in Hodgkin's disease. An anaylsis of technique, tumor eradication, and complications. *Cancer* 1976; 37:2813.
32. Jones A: Transient radiation myelopathy (with reference to Lhermitte's sign of electrical paresthesia). *Br J Radiol* 1964; 37:727.
33. Dische S, Martin WMC, Andersson P: Radiation myelopathy in patients treated for carcinoma of the bronchus using a six fraction regime of radiotherapy. *Br J Radiol* 1981; 54:29.
34. Yeo JD, Lowry C, McKenzie B: Preliminary report on ten patients with spinal cord injuries treated with hyperbaric oxygen. *Med J Aust* 1978; 2:572.

The Authors

SUSAN J. SHAPIRO, M.D.
CARLOS A. PEREZ, M.D.

The authors are from the Radiation Oncology Center, Mallinckrodt Institute of Radiology at Washington University School of Medicine, St. Louis, Missouri.

Reprints

Susan J. Shapiro, M.D.
4939 Audubon Avenue
Suite 5500
St. Louis, Missouri 63110

Exercise Capacity Following Pulmonary Rehabilitation In the Elderly

Michael L. Corriveau, M.D., F.A.C.P., Barbara J. Rosen, R.N., B.S.N., and Gerald F. Dolan, M.D.
St. Louis, Missouri

Pulmonary rehabilitation has proven beneficial for patients with chronic airway obstruction. In this study, the authors evaluate the effect of rehabilitation in elderly patients. Results show that the change in exercise capacity was not related to the patients' age, and suggest that age alone should not be an exclusionary criterion.

Chronic obstructive pulmonary disease (COPD) is a common problem in the elderly population.[1] Pulmonary function declines normally with aging and declines more rapidly in patients who smoke.[2] Because of this, COPD generally becomes symptomatic in the fifth or sixth decade of life. The age of peak prevalence appears to be between age 50 and the late 70s.[3]

Comprehensive pulmonary rehabilitation programs have proven beneficial for patients with COPD. Beneficial results include a reduction in inpatient hospitalization,[4] reduction in anxiety and depression,[5] an increase in ability to procure employment,[6] an increase in the ability to perform activities of daily living,[4] and an increase in exercise capacity.[4,7,8]

Previous reports have described the effects of pulmonary rehabilitation on exercise capacity in groups whose mean age ranges from less than 55 years to more than 65.[7-11] However, a systematic comparison of the effects of pulmonary rehabilitation on exercise capacity in a younger and an older age group has not been reported. We sought to compare the effects of pulmonary rehabilitation on exercise capacity in patients age 60 or less and in patients older than 60.

Methods

We studied 40 patients who participated in a comprehensive pulmonary rehabilitation program. Patients were referred for evaluation for pulmonary rehabilitation based on a diagnosis of obstructive airways disease by routine pulmonary function tests, and dyspnea at rest or on exertion. The patients were separated into two groups based on age. Eighteen patients (17 male, 1 female) were 60 years of age or younger (Group 1), with a mean age of 53 ± 2 years (range, 32 to 60 years). Twenty-two patients (21 male, 1 female) were more than 60 years of age (Group 2), with a mean age of 64 ± 1 years (range, 61 to 74 years). Each patient gave informed consent in accordance with the Veterans Administration Medical Center, St. Louis, regulations governing human investigation.

Each patient was familiarized with the treadmill by walking on it within 24 hours prior to the study. Radial artery catheterization was performed under local anes-

Table 1
Pulmonary Function Tests*

	Measured Values (L)		Percent of Predicted (%)	
	Group 1	Group 2	Group 1	Group 2
TLC	6.30 ± .18	5.89 ± .28	93 ± 3	90 ± 4
FRC	3.99 ± .21	3.69 ± .24	144 ± 8	133 ± 9
FVC	3.14 ± .22	2.88 ± .18	69.5 ± 5	68 ± 6
FEV_1	1.82 ± .15	1.58 ± .12	50 ± 4	48 ± 4
$FEV_1\%$			58 ± 5	55 ± 5
MVV	55.1 ± 6.3	54.7 ± 5.2	42 ± 5	45 ± 5
MMEF	1.05 ± .16	1.06 ± .18	23 ± 4	26 ± 4

Definition of abbreviations: TLC = total lung capacity; FRC = functional residual capacity; FVC = forced vital capacity; FEV_1 = forced expired volume in one second; $FEV_1\%$ = FEV_1/FVC; MVV = maximum voluntary ventilation; MMEF = maximum mid-expiratory flow rate.

* mean ± SEM

thetic using an indwelling catheter that enabled us to perform systemic arterial pressure measurements and arterial blood sampling. The fourth intercostal space at the midclavicular line was used as the zero reference. A simultrace recorder, VR-6 (Electronics for Medicine, Pleasantville, N.Y.), provided pressure tracings. Expired gas was collected in a meteorological balloon via a non-rebreathing J valve. Volumes were measured with a Tissot gasometer (Collins Inc., Braintree, Mass.), to determine minute ventilation ($\dot{V}_E$). The fraction of expired O_2 and CO_2 were measured by Beckman OM-11 and LB-2 gas analyzers (Beckman Instruments, Fullerton, Calif.).

Patients were studied at rest while standing and during a treadmill exercise test with progressive increments in workload to maximal tolerance (Stage 1, 1.7 mph and 0% grade; Stage 2, 2.0 mph and 4% grade; Stage 3, 2.5 mph and 8% grade; Stage 4, 3.0 mph and 12% grade). Arterial blood and expired gas were sampled and a recording of systemic pressure was obtained at rest and during the third minute of each three-minute exercise level. Three-minute exercise levels with small increments were used so that expired gas could be collected during steady-state exercise.

Each patient completed a six-week inpatient pulmonary rehabilitation program. The program consisted of twice-daily exercise using a cycle ergometer. Patients exercised to a target heart rate, defined as the heart rate at which the patient reached an anaerobic threshold during his initial treadmill evaluation. In patients who did not reach a measurable anaerobic threshold, the target heart rate was defined as 75% of the maximum predicted heart rate, or, if that was not achieved, the highest heart rate achieved without ischemic EKG changes. Other services included training in diaphragmatic breathing and pursed lip breathing, emphasis on cessation of smoking, flexibility training and physical therapy, stress management, recreation therapy and educational services. Bronchodilator therapy was initiated or adjusted as indicated. Following rehabilitation, the initial testing protocol was repeated. A treadmill was used for evaluation and a cycle ergometer for conditioning in order to reduce the effect of familiarity with the cycle ergometer during evaluation.

A Wedge spirometer (Med-Science, St. Louis, Mo.) was used to obtain spirometric data, and helium dilution technique was used to obtain lung volume measure-

Table 2
Ventilation and Gas Exchange at Rest*

	Pre-Rehabilitation		Post-Rehabilitation	
	Group 1	Group 2	Group 1	Group 2
$\dot{V}_E$ (L)	12.1 ± 0.6	12.3 ± 0.6	16.0 ± 1.2	16.5 ± 1.0
V_D/V_T (%)	43 ± 2	47 ± 3	46 ± 2	46 ± 2
$P_{(A-a)}O_2$ (mmHg)	27.4 ± 2.3	28.5 ± 1.8	24.8 ± 2.2	30.0 ± 1.7
PaO_2 (mmHg)	74.3 ± 2.9	71.4 ± 1.7	78.7 ± 2.9	74.3 ± 2.7
$PaCO_2$ (mmHg)	38.3 ± 1.2	38.9 ± 1.0	36.7 ± 1.3	36.3 ± 1.2

Definition of abbreviations: $\dot{V}_E$ = minute ventilation; V_D/V_T = physiologic dead space to tidal volume ratio; $P_{(A-a)}O_2$ = alveolar to arterial partial pressure gradient for oxygen.

* mean ± SEM

ments. Values are expressed in measured units and as a percentage of previously published normal values.[12-13] Ventilatory and gas exchange data were calculated as previously reported.[14] All data are presented as mean ± standard error of the mean (SEM). A two-tailed t test was used to determine statistical significance. Correlation coefficients were calculated as Pearson's r product moment correlation coefficient.

Results

The patient sample consisted of 40 patients with COPD.

Pulmonary function tests. The results of pulmonary function testing prior to rehabilitation therapy are shown in Table 1. Both groups had a moderate degree of airflow obstruction and a moderately reduced diffusing capacity. The forced expiratory volume in one second (FEV_1) for patients in Group 1 ranged from 0.83L to 3.25 L; for patients in Group 2, FEV_1 ranged from 0.55L to 2.75L. The maximum voluntary ventilation (MVV) for patients in Group 1 ranged from 20 L/min to 124 L/min. For patients in Group 2, the MVV ranged from 25 L/min to 120 L/min. There were no statistically significant differences between groups for any of the measured pulmonary function test values.

Ventilation and gas exchange. Ventilation and gas exchange variables are shown in Tables 2 and 3. Both groups had evidence of ventilation and perfusion mismatch at rest, as demonstrated by a high physiologic dead space to tidal volume ratio (V_D/V_T). The alveolar to arterial partial pressure gradient for oxygen was increased to a similar degree in both groups, resulting in moderate hypoxemia without hypercapnia.

During exercise, minute ventilation ($\dot{V}_E$) increased to 78% of the resting MVV in both Group 1 and Group 2 patients. Exertional oxygen desaturation was seen in four patients in Group 1 and in eight patients in Group 2, but the mean value for PaO_2 showed little change during exercise in either group.

Following rehabilitation, a significant increase in $\dot{V}_E$ at rest was seen in both groups. Minute ventilation at rest increased by 32% from 12.1 ± 0.6 L/min to 16.0 ± 1.3 L/min ($p < 0.003$) in Group 1, and increased by 35%, from 12.3 ± 0.7 L/min to 16.5 ± 1.0 L/min ($p < 0.0003$) in Group 2. The $\dot{V}CO_2$ increased from 0.240 ± 0.011 to 0.284 ± 0.016 in Group 1, and from 0.234 ± 0.011 to 0.300 ± 0.017 in Group 2. No significant change was seen in arterial blood gases or indices of ventilation and perfusion matching at rest or during exercise or in $\dot{V}_E\ E_{max}$.

Exercise capacity. Exercise capacity was limited in patients in both groups. Prior to rehabilitation therapy, total exercise time (TET) for patients in Group 1 was 8.4 ± 1.0 min, ranging from 2.3 min to 18 min, and the

Table 3
Ventilation and Gas Exchange During Exercise*

	Pre-Rehabilitation		**Post-Rehabilitation**	
	Group 1	Group 2	Group 1	Group 2
$\dot{V}O_2$ (L/min)	1.23 ± 0.08	1.50 ± 0.11	1.21 ± 0.08	1.35 ± 0.09
$\dot{V}_E$ (L)	42.9 ± 2.7	43.3 ± 2.5	45.6 ± 3.5	45.4 ± 3.1
V_D/V_T (%)	36 ± 2	40 ± 3	36 ± 3	36 ± 2
$P_{(A\text{-}a)}O_2$ (mmHg)	26.1 ± 2.3	30.4 ± 2.2	26.4 ± 3.2	32.9 ± 1.8
PaO_2 (mmHg)	76.6 ± 2.8	74.4 ± 2.6	75.6 ± 3.3	70.5 ± 2.1
$PaCO_2$ (mmHg)	38.4 ± 1.0	37.3 ± 0.9	39.8 ± 1.2	40.6 ± 1.2

Definition of abbreviations: $\dot{V}O_2$ = oxygen consumption; $\dot{V}_E$ = minute ventilation; V_D/V_T = physiologic dead space to tidal volume ratio; $P_{(A\text{-}a)}O_2$ = alveolar to arterial partial pressure gradient for oxygen.

* mean ± SEM

highest exercise level achieved in this group varied from 1.0 mph and 0% grade to 2.5 mph and 8% grade. The TET for patients in Group 2 was 8.3 ± 0.6 min, ranging from 3 to 13.6 min. The highest exercise level achieved in this group varied from 1.0 mph and 0% grade to 3.0 mph and 12% grade. Following rehabilitation therapy, 11 of 18 patients in Group 1 and 14 of 22 patients in Group 2 were able to complete a higher level of exercise. The change in $\dot{V}O_2$ at maximal exercise following rehabilitation ($\dot{V}O_2$ E_{max}) was used as an index of change in exercise capacity. The $\dot{V}O_2$ E_{max} was strongly correlated with the change in oxygen pulse at maximal exercise following rehabilitation (O_2 pulse E_{max}) ($r = 0.821$; $p < 0.0001$).

The $\dot{V}O_2$ E_{max} increased from 1.23 ± 0.08 L/min to 1.50 ± 0.11 L/min ($p < 0.002$) in Group 1 patients, and increased from 1.21 ± 0.08 L/min to 1.35 ± 0.09 L/min ($p < 0.04$) in Group 2 patients. The $\dot{V}O_2$ E_{max} following rehabilitation therapy did not differ significantly between the two groups. The average increase in $\dot{V}O_2$ E_{max} was larger in patients in Group 1 (0.269 ± 0.070 L/min vs. 0.144 ± 0.058 L/min), but the difference between the two groups was not statistically significant. The correlation coefficient for age and $\dot{V}O_2$ E_{max} was small and of no statistical significance.

Discussion

There are many potential benefits of a rehabilitation program for patients with COPD. Patients may be hospitalized less frequently and for shorter stays. They may be more able to return to work.[4,6] Anxiety and depression may be reduced in some patients.[5] Many authors have reported an increase in exercise capacity and that patients are better able to perform activities of daily living.[4,7-11]

Although exercise capacity will improve in many patients following pulmonary rehabilitation, it is not clear from published reports whether the physiologic effects of aging might limit the ability to increase exercise capacity in elderly patients with COPD. It is well established that organ function diminishes as a result of the aging process. The maximum heart rate and maximum cardiac output decrease, and arterial blood pressure increases. Maximal voluntary ventilation and spirometric indices decrease. Musculoskeletal system function is marked by a loss of coordination, strength and endurance, and loss of elasticity of cartilage. Some patients develop osteoarthritis. Sensory impairment and injudicious use of medication may also inhibit functional capacity in the elderly.[15]

The physiological decline of aging can be compounded in patients with COPD by a sedentary lifestyle. Patients with COPD who develop dyspnea on exertion frequently become more sedentary, with a subsequent reduction in their level of conditioning. This results in a greater degree of dyspnea on exertion and often, a further reduction in activity.

The relationship between age and change in exercise capacity following pulmonary rehabilitation has not been systematically studied. Various authors have reported results of exercise training in groups with a mean age of less than 60 years. Mohsenifar et al[9] studied the physiologic effects of pulmonary rehabilitation in 15 patients (age range, 45 to 73 years; mean, 55 years). The authors reported a marked increase in endurance time and a subjective improvement in exercise tolerance. Statistically significant reductions in heart rate and arterial lactate levels and a 13% increase in O_2 pulse at comparable work levels were observed after training. No significant changes were seen in spirometry, ventilation or gas exchange.

Degre et al[10] evaluated the hemodynamic effects of six weeks of cycle ergometry training in 11 patients under 65 years (mean, 50 ± 7 years) with COPD. They demonstrated a 10% improvement in maximal oxygen consumption following rehabilitation in those patients without severe hypoxemia or severe hypercapnia. No significant change was found in pulmonary function values, heart rate, stroke volume, or cardiac output.

In 1963, Pierce et al[7] examined the effects of treadmill conditioning in patients with severe emphysema whose mean age was 55 years (range, 39 to 70). They demonstrated a decrease in heart rate, respiratory rate, minute ventilation and oxygen consumption at a given level of exercise, and a 23% increase in $\dot{V}O_2\ E_{max}$. There was no significant change in pulmonary function measurements.

Chester et al[11] also evaluated the effect of treadmill exercise on cardiopulmonary performance in patients with COPD whose age was 60 years or younger. They reported a nearly 400% increase in total work performed. No significant changes were seen in pulmonary function, arterial blood gases or hemodynamic measurements of stroke index, cardiac index, pulmonary vascular resistance, or arteriovenous O_2 difference.

Moser et al[8] reported the results of his pulmonary rehabilitation program in an older population of patients (age range, 50 to 80 years; mean age = 67 years). Twelve of 23 patients improved their exercise endurance as evidenced by a 0.5 to 1.5 mph increase in maximal speed over the initial test. They demonstrated a significant decline in minute ventilation, oxygen consumption, heart rate and respiratory rate at a given workload in 20 of 23 patients. Our study differed from these in that we divided our patient population into those age 60 or less and those older than 60, had them participate in identical rehabilitation programs, and then directly compared the outcomes of the two groups.

Our data demonstrate that in these two groups of patients, with an average age difference of 11 years, but a similar degree of airflow obstruction and gas exchange abnormality, the majority of patients in both groups were able to increase the maximum level of exercise attained. We observed a statistically significant increase in $\dot{V}O_2\ E_{max}$ following rehabilitation in both groups. There was no relationship between age and change in $\dot{V}O_2 E_{max}$ following rehabilitation. Therefore, age did not appear to limit the degree of improvement in exercise capacity after pulmonary rehabilitation.

We found no change in arterial blood gases or parameters of ventilation/perfusion matching following rehabilitation. However, an increase in $\dot{V}_E$ at rest was seen in patients in both groups after rehabilitation. This was accompanied by an increase in $\dot{V}CO_2$ with little change in $PaCO_2$. Fourre et al[16] documented a reduction in central respiratory drive in his patients following pulmonary rehabilitation, which would suggest that $\dot{V}_E$ at rest might be reduced rather than increased. Other authors have reported a reduction in $\dot{V}_E$ for a given workload following rehabilitation. It is not clear why these changes in $\dot{V}_E$ and $\dot{V}CO_2$ occurred in the majority of our patients. Oral hydralazine therapy, which has been shown to increase $\dot{V}_E$[14] was initiated in three patients, and all patients participating in this program had their bronchodilator therapy adjusted. It is possible that changes in these medications contributed to the observed changes in $\dot{V}_E$.[17,18] An increase in fat content of the diet or an increase in caloric intake has been shown to increase $\dot{V}CO_2$.[19] Although caloric intake was not measured, it is possible that total caloric intake during the six-week hospitalization was increased over the usual intake in the indigent population served by our facility.

In conclusion, aging normally produces some degree of functional impairment, which can be compounded by a sedentary lifestyle. Our data demonstrate that, within the age range we studied, change in exercise capacity following rehabilitation was not related to age. The elderly should not be excluded from participation in a pulmonary rehabilitation based solely on age.

References

1. Sobonya RE, Burrows B: The epidemiology of emphysema. *Clin Chest Med* 1983;4:351-358.
2. Fletcher C, Peto R: The natural history of chronic airways obstruction. *Br Med J* 1977;1:1645.
3. Ostrow D: Managing chronic airflow obstruction. *Geriatrics* 1985;40:45-48.
4. Petty TL, Nett LM, Finigan MM, et al: A comprehensive care program for chronic airway obstruction. *Ann Intern Med* 1969;70;1109-

1120.
5. Paine R, Make B: Pulmonary rehabilitation for the elderly. *Clin Geriatr Med* 1986;2:312-332.
6. Fix AJ, Daughton D, Kass I, et al: Emotional, intellectual and psychological predictors of vocational outcome of pulmonary rehabilitation patients. *Psychol Rep* 1980;46:379-382.
7. Pierce AK, Taylor HF, Archer RK, et al: Responses to exercise training in patients with emphysema. *Arch Int Med* 1964;113:78-86.
8. Moser KM, Bokinsky GE, Savage RT, et al: Results of a comprehensive rehabilitation program. *Arch Int Med* 1980;140:1596-1601.
9. Mohsenifar Z, Horak D, Brown HV, et al: Sensitive indices of improvement in a pulmonary rehabilitation program. *Chest* 1983;83:189-192.
10. Degre S, Sergysels R, Messin R, et al: Hemodynamic responses to physical training in patients with chronic lung disease. *Am Rev Respir Dis* 1974;110:395-402.
11. Chester EH, Belman MJ, Bahler RC, et al: Multidisciplinary treatment of chronic pulmonary insufficiency. *Chest* 1977;72:659-702.
12. Goldman HI, Becklake MR: Respiration function tests: Normal values of median altitudes and the prediction of normal results. *Am Rev Tuberc* 1959;79:457-461.
13. Morris JR, Koski A, Johnson LC: Spirometric standards for healthy non-smoking adults. *Am Rev Respir Dis* 1971;103:57-69.
14. Keller CA, Shepard JW, Chun DS, et al: Effects of hydralazine on hemodynamics, ventilation and gas exchange in patients with chronic obstructive pulmonary disease and pulmonary hypertension. *Am Rev Respir Dis* 1984; 130:606-611.
15. Fuller E: Exercise: Getting elderly going. *Patient Care* 1982; 16:67.
16. Fourre JAL, Scoles V, Karetsky MS: The response of COPD patients to exercise training. *Chest* 1986;89:516S.
17. Sanders JS, Berman TM, Bartlett MM, et al: Increased hypoxic ventilatory drive due to administration of aminophylline in normal men. *Chest* 1980; 78:279-282.
18. Kelz H. Samortin T, Stone DJ: Hyperventilation: A manifestation of exogenous beta-adrenergic stimulation. *Am Rev Respir Dis* 1972; 105:637-640.
19. Talpers SS, Romberger D, Bunce S, et al: High carbohydrate concentrations do not increase carbon dioxide production in mechanically ventilated patients. *Am Rev Respir Dis* 1988;137 (2 pt 2):61.

The Authors

MICHAEL L. CORRIVEAU, M.D.
BARBARA J. ROSEN, R.N., B.S.N.
GERALD F. DOLAN, M.D.

The authors are from the Geriatric Research, Education and Clinical Center at the Veterans Administration Medical Center, St. Louis, and the St. Louis University School of Medicine.

This work is supported by the Veterans Administration

The authors acknowledge the technical assistance of Barb Brand, R.N., Terri St. John, R.N., Terry Trumbo, Chris Harris, Doris Stewart, Debra Fortner, and Prentice Davis.

Reprints

Michael L. Corriveau, M.D.
12818 Tesson Ferry Road
St. Louis, Missouri 63128

$200,

Medical Coverage Exclusively For Medical Professionals & Their Employees

That says it all. The MSMA $1,000,000 Major Medical Plan is specifically designed to meet the needs of today's physician . . .

- $1,000,000 lifetime maximum
- Your choice of $500 or $1,000 deductible
- Coverage for a lifetime
- Affordable group rates

Most doctors don't need expensive "first dollar" medical coverage. But when those hospital costs start adding up, you do need to be sure you have a solid plan that stands behind you and your family.

Administered by:
Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

Insured by:
The Mutual Life Insurance
of New York

CALL NOW!

National:
800-821-7303

Missouri:
800-892-7272

Kansas City:
816-756-1060

ASK FOR JAN PACEY

Clip the coupon and send it in for a free brochure.
MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

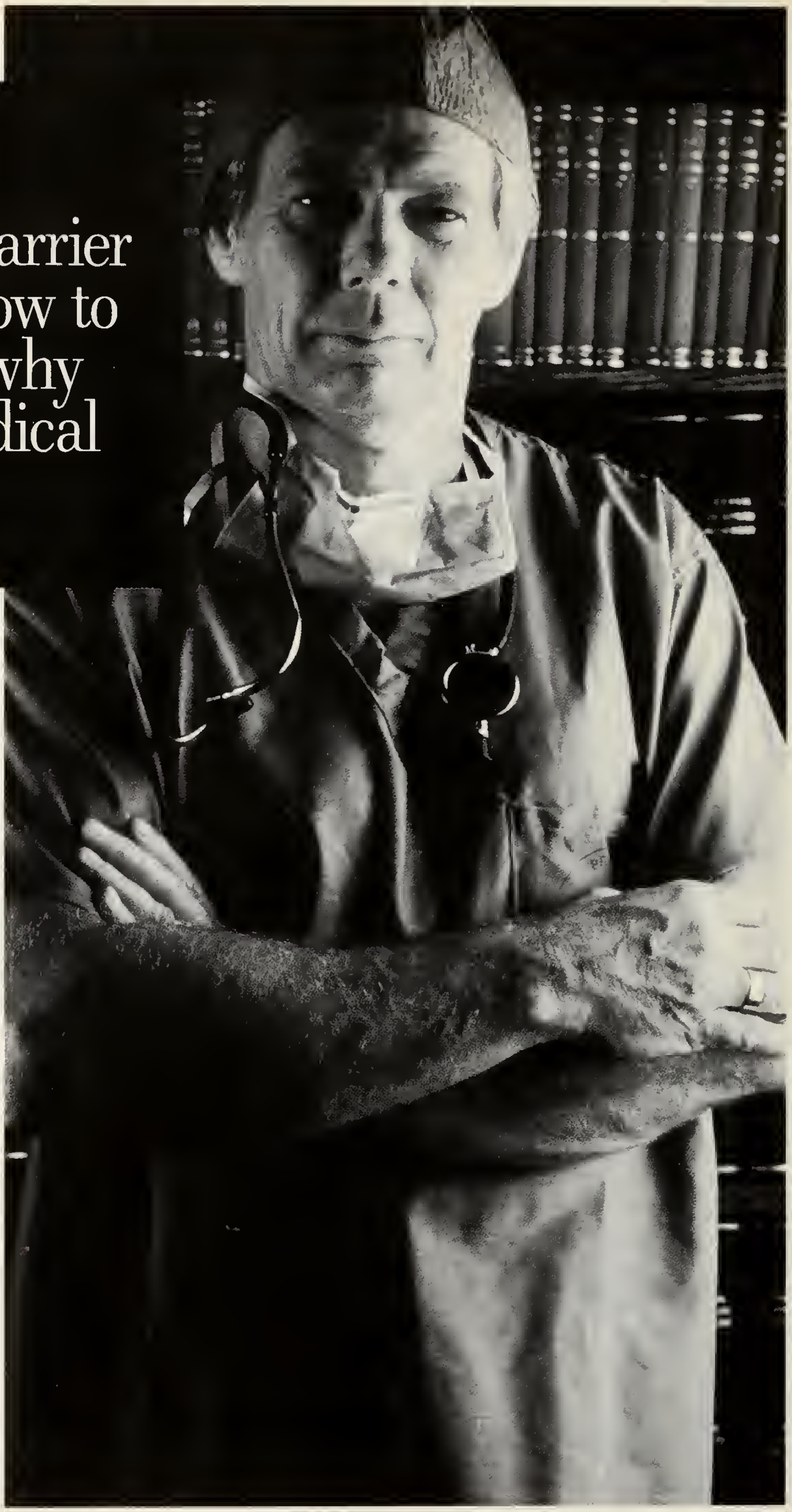
YES! I'd like more information on the MSMA $1,000,000 Major Medical Plan.

Name ______________________________

Address ______________________________

City ______________________________

State ____________________ Zip ______________



"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."

At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

America's premier professional liability insurer.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222
1-800-321-6726

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

November

1 **Heart Murmurs in Children: To Refer or Not To Refer** — Location: Zeno's Steak House, Sullivan, MO. Contact: Communications Dept., Cardinal Glennon Children's Hospital, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

2 - 3 **Advanced Trauma Life Support** — Location: University of Nebraska Medical Center, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402/559-4152.

2 - 4 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis MO. Contact: Elaine Thompson St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

2 - 4 **Kansas City Southwest Clinical Society - Annual Fall Clinical Conference** — Location: Park Place Hotel, Kansas City, MO. Contact: Linda F. Smutz, Executive Director, 7920 Ward Parkway, Suite 205, Kansas City, MO 64114. 816/523-3383.

3 **Eighth Dr. Richard A. and Betty H. Sutter Visiting Professorship in Occupational and Industrial Medicine: "Imaging Occupational Trauma: Acute and Chronic"** — Location: Scarpellino Auditorium, Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: Julie A. Jackovich, Mallinckrodt Institute of Radiology, Washington University Medical Center, 510 South Kingshighway, St. Louis, MO 63110. 314/362-2866.

3 **Strategies for Working with Depressed Older Adults** — Location: Jewish Federation of St. Louis, St. Louis, MO. Contact: Coordinated Day Services Program, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/872-7159.

3 - 4 **Obstetrics - Gynecology Update 1989** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Sue Dunkin, MU School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

3 - 5 **Microsurgery of the Lumbar and Cervical Spine** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

6 - 11 **Microsurgery of the Cranial Base** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

7 - 9 **Introduction to Doppler Echocardiography** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104-1083. 314/577-8167.

8 **Voiding Dysfunction & Urinary Tract Infection in Children** — Ramada Inn, Mt. Vernon, IL. Contact: Communications Department, Cardinal Glennon Children's Hospital, 1402 S. Grand, St. Louis, MO 63104-1083. 314/577-5615. (Advance reservations required.)

9 **New Advances in the Management of Pediatric Infections** — Location: The Hyatt Regency/St. Louis Union Station, St. Louis, MO. Contact: Cathy Caruso, Continuing Medical Education, Washington University School of Medicine, Box 8063, 660 South Euclid, St. Louis, MO 63110. 314/362-6893.

10 **High Risk Obstetrics** — Location: Research Medical Center, Kansas City, MO. Contact: Gregory C. Starks, M.D., The Ed Bixby Institute for Postgraduate Medical Education, Research Medical Center, 2316 East Meyer Blvd., Kansas City, MO 64132. 816/276-4306.

10 - 11 **Nd:YAG Operative Hysteroscopy/Pelviscopy Workshop** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

10 - 11 **Peritoneal Dialysis 1989** — Location: Hudson River Conference Center, Ossining, New York. Contact: Barry Kling, Office of Continuing Medical Education, MA215 Health Sciences Center, MU School of Medicine, Columbia, MO 65212. 314/882-4105.

10 - 12 **Sixteenth Annual Symposium: Anesthesia and The Geriatric Patient** — Location: The Marriott Pavilion Hotel, One Broadway, St. Louis, MO. Contact: Geriatric Symposium, Dept. of Anesthesiology, Box 8054, Washington University School of Medicine, 660 S. Euclid, St. Louis, MO 63310. 314/362-6973.

11 - 12 **Infectious Disease** — Location: Tan-Tar-A, Osage Beach, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

15 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

17 - 18 **Lasers in Surgery** — Location: Lutheran Medical Center, St. Louis, MO. Contact: Tom Walther, Administrator, Lutheran Medical Center, 2639 Miami Street, St. Louis, MO 63118. 314/577-5840.

22 **Low Grade Non-Hodgkin's Lymphoma/Chronic Lymphocytic Leukemia** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

30 - Dec. 2 **First Midwest Regional Conference on Family Preservation** — Location: Hilton Plaza Inn, Kansas City, MO. Contact: Lisa Clements, Ph.D., Missouri Institute of Psychiatry, Continuing Medical Education, MS A418, 5400 Arsenal, St. Louis, MO 63139. 314/644-8803.

December

1 - 2 **17th Annual Diabetes Symposium: Current Topics in Diabetes for the Practicing Physician** — Location: Hyatt Regency, St. Louis Union Station. Contact: Jeanne Rogers, Kilo Diabetes & Vascular Disease Research Foundation, 1227 Fern Ridge Parkway, #100, St. Louis, MO 63141. 314/434-6500.

1 - 2 **Lipid Conference** — University of Missouri School of Medicine, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, MU School of Medicine, Columbia, MO 65212. 314/882-4105

1 - 3 **Cardiovascular Medicine Legal Environment: Medicine's Response** — Location: San Diego Marriott and Marina, San Diego, CA. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

2 **Modulating the Immune Response to Benefit the Patient** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

5 - 7 **Introduction to Doppler Echocardiography** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 9 **The Head-Injured Patient: Advances in the '80's** — Location: Hyatt Regency at Union Station, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

20 **Diagnosis and Management of Aggressive Non-Hodgkin's Lymphomas** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

1990

January

5 - 6 **Lung Cancer** — Location: University of Missouri-Columbia School of Medicine, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, MU School of Medicine, Columbia, MO 65212. 314/882-4105.

9 - 11 **Introduction to Doppler Echocardiography** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

12 **Clinical Conference in Otolaryngology: Treatment of Cutaneous Malignancies** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

January

17 **AIDS: Treatment of the Disease and Associated Infections** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 E. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

18 **Office Treatment of Common Cardiovascular Problems** — Location: Hyatt Regency Hotel at Union Station, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

19 - 21 **Advanced Trauma Life Support Instructor/Provider Course** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Mary Keegan, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8365.

22 - 26 **Medicolegal Death Investigator Training Course** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Mary Fran Ernst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/725-1884.

February

1 - April 1 **31st Annual Postgraduate Institute For Pathologists in Clinical Cytopathology - Home Study Course A** — Location: Home Study Course offered by Johns Hopkins University School of Medicine, Baltimore, MD. Contact: John K. Frost, M.D., or Ms. Betty Ann Remley, 111 Pathology Bldg., Johns Hopkins Hospital, Baltimore, MD 21205. 301/955-8594.

6 - 8 **Introduction to Doppler Echocardiography** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 10 **10th Annual Conference on Peritoneal Dialysis** — Location: Loews Anatole Hotel, Dallas, Texas. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

14 **Prostate Cancer** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

16 **Clinical Conference in Otolaryngology: Contemporary Laser Surgery** — Location: St. John's Mercy Medical Center, von Gontard Conference Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

21 - 23 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

23 - 25 **Current Clinical Applications of Cardiac Ultrasound** — Location: Vail, Colorado (location pending). Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

March

2 **Preceptors Day** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

2 - 4 **Organizational Systems** — Location: University of Missouri, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

3 - 4 **Family Practice Update** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

8 **Tobacco Conference 1990: A Forum for Professionals** — Location: Capitol Plaza Hotel, Jefferson City, MO. Contact: Monica H. Eischen, Missouri Department of Health, Division of Chronic Disease Prevention and Health Promotion, 201 Business Loop 70 West, Columbia, MO 65203. 314/875-2218.

12 - 13 **Critical Care Update** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, MU School of Medicine, Columbia, MO 65212. 314/882-4105.

16 **Eighth Annual Symposium on Geriatric Medicine** — Location: Breckenridge Inn Frontenac, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

21 **Cancer of Unknown Primary Site** – Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

23 - 24 **Advanced Trauma Life Support Provider Course** – Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Mary Keegan, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8365.

April

3 - 5 **Introduction to Doppler Echocardiography** – Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

6 - 8 **Microsurgery of the Lumbar and Cervical Spine** – Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

18 **New Imaging Modalities in Cancer Diagnosis** – Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 E. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

21 **New Directions in Cardiology: Update in Invasive & Non-Invasive Therapies** – Location: Hyatt Regency Hotel at Union Station, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

23 - 27 **Medicolegal Death Investigator Training Course** – Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

23 - May 4 **31st Annual Postgraduate Institute for Pathologists in Clinical Cytopathology –In-Residency Course B** – Location: Johns Hopkins Medical Institutions, Baltimore, MD. Contact: John K. Frost, M.D., or Ms. Betty Ann Remley, 111 Pathology Bldg., The Johns Hopkins Hospital, Baltimore, MD 21205. 301/955-8594.

Most insurors only offer a
"one-size-fits-all" policy.

MISSOURI

Emergency Medicine or Family Practice Opportunities

Family Practice — St. Louis: Join 15 member physician group providing coverage for five clinics. BC/BE FP with experience in female medicine. Hours Monday through Friday.

Emergency Medicine — Near Kansas City: Located one hour from Kansas City. Emergency Department staff position. ED volume 8,000 annually.

All independent contract physicians with Spectrum are offered:

- a guaranteed competitive rate of reimbursement
- occurence malpractice insurance coverage
- allowance for CME, professional dues and relocation expenses

For complete information, contact:

Mary Dwyer
Spectrum Emergency Care, Inc.
P.O. Box 27352
St. Louis, MO 63141
1-800-325-3982, ext. 3031

Call for Resolutions

The 132nd Annual Convention of the Missouri State Medical Association will be held April 5-8, 1990, at Marriott's Tan Tar-A Resort, Lake of the Ozarks.

Resolutions to be introduced at the 1990 House of Delegates must be submitted to MSMA Headquarters by **February 19, 1990,** to be published in the Delegate's Handbooks.

Resolutions not submitted before the deadline must be introduced under the procedure outlined in the MSMA Bylaws, Chapter III, Sect. I. Prompt submission of resolutions assures their inclusion in the Handbook and allows for their full consideration.

If you have questions regarding resolution submission, contact Jo-Ellyn M. Ryall, M.D., Speaker, MSMA House of Delegates, 9216 Clayton Rd, #105, St. Louis, MO 63124, 314/868-7700 or MSMA Headquarters.

We offer three.

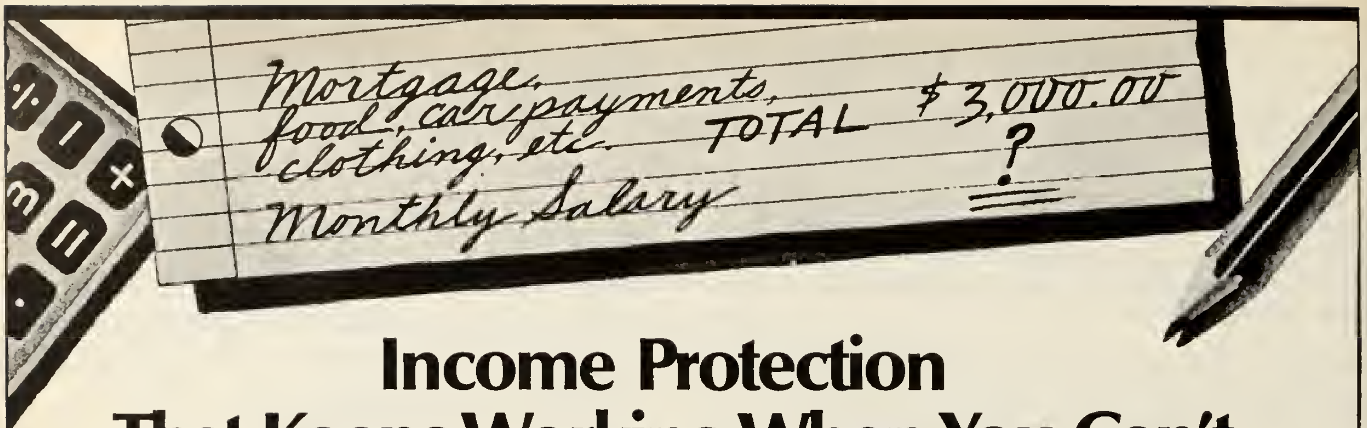
At Risk Control Associates, we understand that every physician's practice is unique.

That's why we have three separate types of medical liability insurance. Not only do we offer Claims Made and Occurrence Policies, but we're the first in the country to offer a Claims Paid Policy that can save you thousands of dollars a year in premiums.

Call today for a free coverage evaluation or more information. Because when you need it, the right kind of liability coverage isn't expensive. It's priceless.

RISK CONTROL
ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS

1111 SOUTH GLENSTONE, SUITE 3-102, SPRINGFIELD, MO 65804
417 862-0650 TOLL FREE 1-800-422-5122



Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance programs offer you coverage and cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: **James**
FRED.S.JAMES&CO.OFMISSOURI,INC.

Please send me a brochure and application for the Missouri State Medical Association sponsored plan(s) I've checked below. I understand there is absolutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______
Address ______
City ______ State ______ ZIP ______
Phone: ( ) ______ Best time to call: ______

Serving MSMA
Since 1943

Continental Insurance℠
Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

Community Service Nominations Open

The MSMA is now accepting nominations for the 1990 Citizenship and Community Service Award. Recipients, who must be members of the Missouri State Medical Association, are selected on the basis of their contributions and service to their communities and fellow citizens, both in medical and non-medical capacities.

Letters of nomination, including the candidate's curriculum vitae and supporting documentation, may be sent to the Missouri State Medical Association, P.O. Box 1028, Jefferson City, MO 65102. Alternatively, individuals may wish to offer a nominee through their local medical society.

Deadline for nominations is November 1. The award will be presented at the 1990 annual convention, to be held April 5-8, 1990, at Tan-Tar-A Resort, Lake of the Ozarks. ■

New Members

■ **Jeffrey O. Anglen, M.D.**, 4320 Wornall Road, Suite 720, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Anglen received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at Johns Hopkins School of Medicine in 1983. He completed his residency at Johns Hopkins Hospital, Baltimore, MD. Dr. Anglen specializes in orthopaedic surgery.

■ **George A. Gates, M.D.**, 517 S. Euclid, Box 8115, St. Louis 63110, has become a member of the Missouri State Medical Society. Dr. Gates obtained his medical degree at the University of Michigan Medical School in 1959. He completed his residency at the University of Michigan Hospitals, Ann Arbor, MI. Dr. Gates specializes in otolaryngology.

■ **Mikel A. Ludwikosky, M.D.**, Lee's Summit Community Hospital, 530 N. Murray Road, Lee's Summit 64063, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Ludwikosky received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1982. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Ludwikosky specializes in anesthesiology.

■ **Larry D. Spradlin, M.D.**, 1010 Carondelet Dr., Suite 328, Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Spradlin received his preliminary education at Kansas State University and obtained his medical degree at the University of Kansas in 1983. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Spradlin specializes in obstetrics/gynecology.

■ **Charles W. Van Way, III, M.D.**, 4400 Wornall Road, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Van Way received his preliminary education at Yale University and obtained his medical degree at the Johns Hopkins University School of Medicine in 1964. He completed his residency at Vanderbilt University Affiliated Hospitals, Nashville, TN. Dr. Van Way specializes in general, vascular and thoracic surgery.

■ RESIDENT SECTIONS

Boone County Resident Section

James M. Downard, M.D. — *Obstetrics/Gynecology*
Michael F. Scheer, M.D. — *General Surgery*

St. Louis Resident Section

Dale P. Harris, M.D. — *Radiology*
Timothy L. McCullough, M.D. — *Family Practice*
Zinnat P. Meghjee, D.O. — *Internal Medicine*
Catherine M. Ong — *Pediatric Cardiology*
Joseph M. Thornbill, M.D. — *Anesthesiology*

Greene County Resident Section

Scott A. Turner, M.D. — *Family Practice*
Kimberly M. Wirths, M.D. — *Family Practice*

Three Vital Prescriptions For A Happy Retirement… All In One Comprehensive Program

The MSMA Retirement System

1 Pre-Retirement Planning

Through Prudential-Bache, MSMA provides a program for building and protecting your wealth. This program assesses your current financial condition and provides you with a coordinated plan to help you secure your financial goals.

2 Business & Retirement Planning

Through Prudential-Bache and Trust Consultants, MSMA provides a program with considerable benefits:

☐ Self-trusteeship of plans
☐ Fast, accurate plan design
☐ Complete administration
☐ Access to country's top money managers

3 Post-Retirement Planning

As you approach your well-earned retirement, your MSMA member benefit provides a decision-making tool, through Prudential-Bache, to coordinate a selection of settlement options and tax treatment for retirement plans. Estate planning is assessed when necessary.

Many MSMA members have already put the MSMA Retirement System to use. Why not you? The details are now available on audio tape. For your free copy, call us today or send in the coupon below.

MSMA Retirement System c/o Prudential-Bache Securities
231 S. Bemiston Ave., St. Louis, MO 63105
ATTN: Michael G. Grimes
314-721-9200, toll free **1-800-877-9200**

☐ Yes, send me a MSMA Retirement System audio tape today!

Name Address

City State Zip Phone ( )

Clients, please give name and office of Account Executive

Missouri State Medical Association

© 1989 Prudential-Bache Securities Member SIPC

Medical School News

University of Missouri-Columbia

Friends, colleagues and former students of Professor Emeritus **Brent M. Parker, M.D.**, have established a professorship in his name for the department of medicine's cardiology division. The professorship was announced at an August 26 banquet honoring Parker.

Before his retirement in July, Parker had served as director of cardiology in MU's School of Medicine since 1983. He joined the University in 1973. Early in his career, he made several important research observations about the development of acute pulmonary embolism, along with garnering grants from the National Heart, Lung and Blood Institute and pharmaceutical companies. Parker's other contributions include work with digitoxin and research on the athlete's heart.

Donald A.B. Lindberg, M.D., director of the National Library of Medicine, was a keynote speaker for MU's first-ever academic computer conference, "Computing Frontiers in the Health Sciences," held September 15. In addition to Lindberg, who formerly directed the Information Science Group in MU's School of Medicine, internationally known speakers included **Michael J. Ackerman, Ph.D.**, director of the National Library of Medicine's Educational Technology Branch; **Susan J. Grobe, R.N., Ph.D.**, of the University of Texas at Austin; and **Robert Greenes, M.D., Ph.D.**, of the Harvard Medical School.

The division of dermatology at MU's School of Medicine honored Professor **Philip Anderson, M.D.**, for 25 years of service September 22-23. Former students and residents were among those commemorating his work. He also was a visiting professor at the University of British Columbia during September.

Donald R. Kay, M.D., of the division of immunology and rheumatology has been promoted to professor of medicine.

Jerry Parker, Ph.D., clinical associate professor of psychology, gave invited presentations at arthritis pain management conferences for the American Health Professions Association September 8 in Atlanta and October 6 in Washington, D.C.

Four members of MU's department of surgery gave a poster presentation in June in Taipei, Taiwan, at Advances in International Nursing Scholarship, Sigma Theta Tau International Research Congress. Participating were **Theresa Boley, R.N., B.S.N.**, research associate; **Jack Curtis, M.D.**, professor and chief of cardiothoracic surgery; **Joseph Walls, M.D.**, associate professor; and **Richard Schmaltz, M.D.**, clinical instructor.

David B. Hardin, M.D., a resident physician in the department of physical medicine and rehabilitation, had a scientific paper accepted for presentation at the annual American Academy of Physical Medicine and Rehabilitation and American Congress of Rehabilitation Medicine joint meetings November 5-10 in San Antonio, Texas. Representatives from the department of medicine's division of immunology and rheumatology giving a poster presentation at the meetings are **Donald Kay, M.D.**, associate professor; **Jerry Parker, Ph.D.**, clinical associate professor of psychology; **John Uveges, Ph.D.**, a psychologist in private practice; and **Mike Lyon, M.D.**, a former fellow in the division.

Jerry Obritsch, M.D., third-year resident physician in obstetrics and gynecology, had an abstract accepted to the Southern Medical Association's 83rd annual scientific assembly November 5-8 in Washington, D.C.

Three physicians from the Mid-Missouri Rehabilitation Clinic in Jefferson City have joined the department of physical medicine and rehabilitation part-time to supplement its attending physician staff. They are **John Hart, M.D.**, **Jon Rupright, M.D.**, and **Brenda Guenthner, M.D.**

University of Missouri-Kansas City

UMKC officially added another pillar to its medical teaching structure on September 7, when administrators signed an agreement making St. Luke's Hospital of Kansas City a primary affiliate. Officials have been ironing out the details of the agreement since February, when they announced their intent to join forces. The pact was made official at a meeting of the University of Missouri's Board of Curators. Under the agreement, St. Luke's will provide UMKC with $3 million annually, and the hospital will have full representation on medical school administrative councils and committees.

The move merges Kansas City's two largest residency training programs, those at Truman Medical Center and those at St. Luke's, and will combine all undergraduate, graduate and continuing medical education programs. Internal Medicine, the first and largest of the residency programs to be joined will be merged July 1, 1990.

Dr. John Barnard, director of Medical Affairs at St. Luke's Hospital, has been chosen to fill the new position of Associate Dean for St. Luke's Affairs. Dr. Barnard will direct the Medical Education Department at St. Luke's and will work closely with the leadership of both UMKC and St. Luke's in merging the elements of undergraduate, graduate, and continuing medical education activities at the two institutions. Prior to becoming director of Medical Affairs, Dr. Barnard was a member of St. Luke's medical staff and a partner in the Dickson-Dively Orthopaedic Clinic.

■ About 150 Midwestern physicians attended an August 25-26 Weekend Lipids Conference in Kansas City sponsored by the School of Medicine. Nobel prize laureate **Joseph L. Goldstein, M.D.,** was the featured speaker. Dr. Goldstein is professor and chairman of the Department of Molecular Genetics at the University of Texas Health Sciences Center, Southwestern Medical School, Dallas. He was a co-winner of the 1985 Nobel prize in physiology of medicine. Other featured speakers included **David Bilheimer, M.D.,** of the University of Texas, Southwestern Medical Center, Dallas; **H. Bryan Brewer, Jr., M.D.,** from the National Institutes of Health, and **John Gwynne, M.D.,** of North Carolina School of Medicine. The conference's primary topics included clinically relevant aspects of lipid metabolism and the genetics of dyslipidemias. The meeting was made possible by an educational grant from Merck, Sharp & Dohme pharmaceutical company.

■ **Harry S. Jonas, M.D.,** former dean of the Medical School, returned October 22 to present the keynote speech at the school's annual Year-1 convocation, a tradition which began under his administration. Now Director of the Division of Undergraduate Medical Education at the American Medical Association, Dr. Jonas's topic was "Everything You Need to Know."

■ With a $154,000 grant from the National Institute on Drug Abuse, **Mahmoud Ahmed, Ph.D.,** is continuing studies on the effects of drug abuse during pregnancy to which he has devoted the past 15 years. Through his investigation, "The Effect of Drug Abuse on the Placental Opiate System," Dr. Ahmed is working to understand the molecular mechanisms of drug addiction in humans. The study focuses on morphine and its treatment substitute, methadone, and heroin.

■ Three groups of UMKC investigators recently were awarded one-year grants by the University of Missouri's Sarah Morrison Bequest for Research in Internal Medicine.

With a $12,000 Sarah Morrison bequest, principal investigator **Uri Alon, M.D.,** of Children's Mercy Hospital, is working with co-investigators **Brian Wicklund, M.P.H., M.D., Sri Melethil, Ph.D., David J. Harris, M.D.,** and **Arnold I. Freeman, M.D.,** on a multi-faceted study, "The Protective Effect of Thiosulfate Against Cisplatin-Induced Nephrotoxicity: Clinical and Pharmacokinetic Implications." The researchers will be doing both clinical and pharmacological investigations in their study.

A $25,000 Sarah Morrison grant went to **Mahmoud S. Ahmed, Ph.D., Dev Maulik, M.D., Ph.D.,** and **Howard Kilbride, M.D.,** for "Studies on the Effects of Cocaine Use During Pregnancy on the Mother, Newborn, and Placenta," and $9,000 went to principal investigator **George Reisz, M.D.,** and co-investigators **Betty Herndon, Ph.D.,** and **Cynthia Nyquist-Battie, Ph.D.,** for "Mechanisms of Protection from Pulmonary Superoxide Toxicity."

■ **Hans Uffelmann, Ph.D.,** professor of philosophy and medicine, gave the plenary address at the Seventh World Congress of Logotherapy in Kansas City, Missouri. His topic was "The Ethical Imperative of the Healing Arts and Sciences." He also presented "AIDS and Fraud: The Ethical Dimensions" at the annual meeting of the Arkansas Academy of Family Physicians, in Little Rock, Arkansas.

■ **Mikhail Paltsev, M.D.,** rector (dean) of the First Moscow Medical School gave a presentation on "Medical Student Activities for Prevention of Nuclear War" during a September visit to Kansas City. Dr. Paltsev was one of four Soviet physicians who visited the United States on behalf of the group, Physicians For Social Responsibility, an international organization dedicated to helping prevent nuclear war.

■ Fifteen medical students have been initiated into UMKC's Delta Alpha Chapter of Mortar Board. Mortar Board is a national college honor society that recognizes the qualities of dedicated service to the university community, superior scholarship, and outstanding and continual leadership. New Medical School members included: **Manal Abdelmalek, Jackie Cheng, Danita Cole, Stacey Copeland, Todd Cunningham, Julie Gray, Charisse Hills, Debra Jaffe, Stephen Lim, Manish Naik, John Parker, Sandy Patel, Venu Reddy, Matt Sutton,** and **Melody Yaman.**

Washington University

■ **James O. Hepner, Ph.D.,** professor of health administration and director of the graduate health administration program at Washington University School of Medicine, has assumed the office of chairman-elect of the American College of Healthcare Executives.

Hepner will serve a consecutive three-year term as chairman-elect, chairman and immediate past-chairman with the college, a Chicago-based international professional society of more than 22,000 healthcare executives. The college works to enhance health care management through comprehensive programs in credentialing, professional assessment, education, career counseling, publications, research and public policy.

■ **Neville Grant, M.D.,** has been elected as a representative of part-time faculty members to the Executive Faculty of Washington University School of Medicine in St. Louis. He was chosen by the school's part-time faculty to serve on the council, which is the school's governing body.

■ **Philip W. Majerus, M.D.,** professor of medicine and biological chemistry at Washington University School of Medicine in St. Louis, received MERIT status for his latest grant. The five-year grant, totalling $2.3 million, is from the National Heart, Lung and Blood Institute, part of the National Institutes of Health.

Majerus is known for his research on the role of platelets in forming blood clots and for the discovery of mechanisms by which cells respond to hormones and other external agents. Majerus was the first to conduct clinical research indicating that daily low doses of aspirin can help prevent possibly fatal thrombosis in kidney dialysis patients, without harmful side effects.

■ **Jack R. Hessler, D.V.M.,** has been named assistant vice chancellor for veterinary affairs and director of the division of comparative medicine at Washington University in St. Louis.

Hessler's appointment was effective August 1. He comes to St. Louis from Memphis, where he has served as chairman of the Department of Comparative Medicine at the University of Tennessee and as chief of the veterinary medical unit of the Veterans Administration Medical Center.

In the field of laboratory animal medicine, Hessler is widely-recognized as an expert in laboratory animal resource management and research animal facility planning. Much of his recent work has focused on design of environments for laboratory animals. He has conducted numerous studies related to pulmonary and circulatory physiology.

■ **William H. Daughaday, M.D.,** lecturer in medicine, *Irene and Michael Karl Professor of Medicine emeritus,* and **Emil R. Unanue, M.D.,** *Edward Mallinckrodt Professor* and head of the Department of Pathology, have been elected as fellows of the American Academy of Arts and Sciences.

Daughaday, an internationally-acclaimed endocrinologist who directed the metabolism division for 35 years, was elected in recognition of his research on basic hormonal action, specifically that of growth hormone. He discovered that the action of growth hormone in stimulating growth is regulated by plasma fators called somatomedins, and developed methods for measuring very small amounts of somatomedin in plasma as an index of growth hormone activity. These methods proved useful in diagnosing disorders of human growth, such as dwarfism, and acromegaly, and thus created a new branch of endocrinology.

Unanue is an immunopathologist who has centered his research on the interactions among immune system cells. He has been instrumental in showing the critical role played by macrophages, cells that activate the body's immune response to foreign invaders. Macrophages ingest and destroy foreign substances, and also stimulate the production of specific white blood cells that attack invaders. Macrophage interactions with other immune system cells are important in organ transplants, and in the body's response to many disease states, especially infection and cancer. Unanue and his associates have identified how proteins are handled by the macrophages as well as the function of his tocompatibility molecules.

■ **Lawrence Tychsen, M.D.,** whose work has begun to unravel the cause of crossed eyes in infants, has been appointed chief of pediatric ophthalmology at St. Louis Children's Hospital and Washington University Medical Center. His work on eye crossing in infants has earned him one of the first Career Development Awards from the Research to Prevent Blindness Foundation. Tychsen's research has shown that crossed eyes occur in infants because one area of the infant's brain develops too slowly, not because the eye muscles are "lazy." Early eye muscle surgery appears to stimulate more normal brain development in these infants.

St. Louis University

■ More than 15 million Americans suffer from some form of hearing loss. In order to provide comprehensive diagnosis and treatment, St. Louis University Medical Center is instituting a cochlear implant program. **James E. Benecke, Jr., M.D.,** associate professor of otolaryngology and director of otolaryngology/neurotology, will head the new program.

In conjunction with the start of the program, **William F. House, M.D., D.D.S.,** founder of the prestigious House Ear Institute in Los Angeles and one of the developers of the cochlear implant, lectured at a special clinic conference titled "Management of the Hearing Impaired Child." Following the conference, an open house was held in the department of otolaryngology.

Dr. House is internationally recognized as the "father of neurotologic surgery," and is considered an expert on hearing disorders.

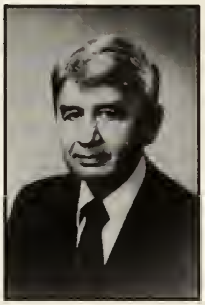
■ **Thomas C. Westfall, Ph.D.,** professor and chairman of the department of pharmacology at St. Louis University School of Medicine, has been appointed by the National Board of Medical Examiners to serve a four-year term on the National Board's Part I Pharmacology Test Committee.

Dr. Westfall is one of 100 individuals selected from among the most prominent members of medical faculties throughout the United States and Canada. Members of the board will provide expertise in the designing, development, and evaluation of test questions for the National Board examinations. Each board member submits approximately 60 questions throughout the year, to be reviewed at the annual meetings for possible inclusion on various examinations.

■ A major international microsurgical conference was held at St. Louis University Medical Center November 6-11. The conference titled "Microsurgery at the Cranial Base," was one of the most prestigious training forums ever held focusing on this type of microsurgery.

The week-long conference gave surgeons the opportunity for hands-on surgical instruction. In an innovative approach, surgical procedures were demonstrated using three-dimensional video equipment developed at St. Louis University School of Medicine. The equipment allows numerous surgeons to view a procedure with the use of a television monitor, instead of individually peering through a microscope.

Heading the 11-member faculty for the conference was **Ugo Fisch, M.D.,** professor and director of the otolaryngology clinic at the Zurich University Hospital in Switzerland. **Paul H. Young, M.D.,** assistant clinical professor in the division of neurosurgery and department of anatomy/neurobiology, and **James E. Benecke, Jr., M.D.,** associate professor in the department of otolaryngology —head and neck surgery at St. Louis University School of Medicine, were course directors for the conference as was former neurosurgery resident **Gregory J. Bailey, M.D.,** now a private docent at the Zurich University Hospital. **Margaret H. Cooper, Ph.D.,** associate professor in the departments of otolaryngology — head and neck surgery and anatomy/neurobiology, at the St. Louis University School of Medicine, was the course coordinator.



■ **Vallee L. Willman, M.D.,** *C. Rollins Hanlon Professor* and chairman of the department of surgery, St. Louis University School of Medicine, is one of five individuals recently honored by the Mid-America Transplant Association (MTA) for their contributions to the field of transplantation.

Dr. Willman was recognized as St. Louis' pioneer for heart transplantation, having performed the first heart transplant in the Midwest at the medical center in 1972. In 1956, Dr. Willman designed a heart-lung machine which paved the way for open heart surgery.

Four surgeons from St. Louis University School of Medicine serve on the MTA Board of Directors: **D. Glenn Pennington, M.D.,** professor of surgery in the cardiothoracic division and director of heart replacement services; **Leslie W. Miller, M.D.,** associate professor of surgery and internal medicine in the cardiology division; **Paul J. Garvin, M.D.,** professor of surgery and director of the renal transplant program, and **John J. Brems, M.D.,** assistant professor of surgery and surgical director of the liver transplant program.

■ **Judson G. Randolph, M.D.,** surgeon in chief at Children's Hospital National Medical Center, Washington, D.C., was the guest speaker at the third annual *Vallee L. Willman Lectureship* at St. Louis University Medical Center. Dr. Randolph's lecture was titled "Surgery of the Esophagus in Infants and Children."

The *Vallee L. Willman Lectureship* was established in honor of **Vallee L. Willman, M.D.,** *C. Rollins Hanlon Professor* and chairman of the department of surgery, and is supported by the Freund Foundation.

■ **Margie K. Edel, Ed.D.,** assistant professor of nursing, St. Louis University School of Nursing, has been awarded a three-year, $495,565 grant from the Department of Health and Human Service's Nursing Special Projects. The grant will be used to support "Clinical Nurse Education in Rehabilitation of Elderly."

The grant will be used for a gerontological nursing training project and is the first funded effort between the School of Nursing and The University Hospital. This is one of the first projects of its kind developed specifically for the baccalaureate education of nurses focusing on the rehabilitation of the elderly in the acute care setting. The project will be implemented in the spring of 1990 for nursing students.

■ Three books exploring modern concerns of medical ethics have recently been published by the Catholic Hospital Association. The books were co-authored by **Rev. Kevin O'Rourke, O.P., Ph.D., S.T.L.,** director of the Center for Health Care Ethics, St. Louis University Medical Center. The books include: *Medical Ethics: Common Ground for Understanding, Volume II*; *Healthcare Ethics*; and *Medical Ethics — Sources of Catholic Teachings.*

Father O'Rourke stated that the efforts of these books was to communicate with other people concerned with medical ethics. A nationally-renowned and respected ethicist, Father O'Rourke has now authored seven books, which are used as textbooks in Catholic colleges and universities throughout the United States, Canada and Europe. Presently, he is a member of the Vatican Commission for Health Care Workers and the Ethics Committee of the Archdiocese of Chicago. He joined the Dominican Order in 1947 and was ordained in 1954. In 1979, Father O'Rourke founded the Center for Health Care Ethics at St. Louis University Medical Center.

■ **Shobha N. Joshi, M.D.,** assistant professor of internal medicine and acting director of the division of gastroenterology, St. Louis University School of Medicine, has been named medical director of St. Louis University Medical Center's liver transplantation program. The liver transplantation program was established in July 1988. **John J. Brems, M.D.,** assistant professor of surgery, is surgical director of the program.

■ **Col. John Andrew Stith, M.D.,** has been named assistant professor of otolaryngology and director of pediatric otolaryngology at the St. Louis University School of Medicine. Dr. Stith comes to St. Louis from Malcolm Grow United States Air Force Medical Center at Andrews Air Force Base in Maryland, where he was chief of otolaryngology — head and neck service from 1986-1989.

In Memoriam

■ **Jerry Bamshad, M.D.**, died August 27, 1989 at the age of 62. Dr. Bamshad, a dermatologist, practiced medicine in St. Louis. He obtained his medical degree at the Medical School, Pahlavi University, Meshed, Iran in 1956. Dr. Bamshad was a member of the St. Louis Metropolitan Medical Society.

■ **Louis K. Beasley, M.D.**, died August 21, 1989 at the age of 78. Dr. Beasley, a gastroenterologist, practiced medicine in St. Louis. He obtained his medical degree at the Washington University School of Medicine in 1939. Dr. Beasley was a member of the St. Louis Metropolitan Medical Society.

■ **Bryce H. Bondurant, M.D.**, died August 20, 1989 at the age of 74. Dr. Bondurant, M.D., an obstetrician/gynecologist, practiced medicine in St. Louis. He obtained his medical degree at the Washington University School of Medicine in 1943. Dr. Bondurant was a member of the St. Louis Metropolitan Medical Society.

■ **Michael E. Castillo, M.D.**, died September 13, 1989 at the age of 67. Dr. Castillo, an ophthalmologist, practiced medicine in Kansas City for 23 years. He obtained his medical degree at the University of San Marcos, Lima, Peru in 1953. Dr. Castillo was a member of the Clay-Platte County Medical Society.

■ **Senatro W. DiLeo, M.D.**, died September 10, 1989 at the age of 74. Dr. DiLeo, an obstetrician/gynecologist, practiced medicine in St. Louis. He obtained his medical degree at the St. Louis University School of Medicine in 1945. Dr. DiLeo was a member of the St. Louis Metropolitan Medical Society.

■ **Preston C. Hall, M.D.**, died August 12, 1989 at the age of 84. Dr. Hall, a family practitioner, practiced medicine in St. Louis. He obtained his medical degree at the St. Louis University School of Medicine in 1930. Dr. DiLeo was a member of the St. Louis Metropolitan Medical Society.

■ **Stanley F. Hampton, M.D.**, died August 24, 1989 at the age of 81. Dr. Hampton, an anesthesiologist, practiced medicine in St. Louis. He obtained his medical degree at the Washington University School of Medicine in 1934. Dr. Hampton was a member of the St. Louis Metropolitan Medical Society.

■ **William F. Kuhn, II, M.D.**, died August 24, 1989 at the age of 78. Dr. Kuhn, an occupational medicine specialist, practiced medicine in Kansas City for more than 40 years. He obtained his medical degree at the University of Kansas Medical School in 1936. Dr. Kuhn was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Clinton W. Lane, M.D.**, died September 16, 1989 at the age of 92. Dr. Lane, a dermatologist, practiced medicine in St. Louis. He obtained his medical degree at St. Louis University School of Medicine in 1921. Dr. Lane was a member of the St. Louis Metropolitan Medical Society.

■ **Thomas O. Lyles, M.D.**, died August 20, 1989 at the age of 42. Dr. Lyles, a urologist, practiced medicine in St. Louis. He obtained his medical degree at the Washington University School of Medicine in 1975. Dr. Lyles was a member of the St. Louis Metropolitan Medical Society.

■ **Charles A. Montani, M.D.**, died September 19, 1989 at the age of 85. Dr. Montani, a family practitioner, practiced medicine on The Hill in St. Louis for 53 years, before retiring in 1982. He obtained his medical degree at St. Louis University School of Medicine in 1928. Dr. Montani was a member of the St. Louis Metropolitan Medical Society.

■ **Antonio R. Paschino, M.D.**, died September 18, 1989 at the age of 66. Dr. Paschino, a psychiatrist, practiced medicine in the Kansas City area for more than 25 years. He obtained his medical degree at Buenos Aires University, Argentina in 1960. Dr. Paschino was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Jose Raphel, M.D.**, died June 29, 1989 at the age of 71. Dr. Raphel, a psychiatrist, practiced medicine in St. Joseph for 41 years before retiring in 1987. He obtained his medical degree at the University of Havana, Cuba School of Medicine in 1946. Dr. Raphel was a member of the Buchanan County Medical Society.

■ **John D. Sertl, M.D.**, died September 2, 1989 at the age of 77. Dr. Sertl, a family practitioner, practiced medicine in St. Louis. He obtained his medical degree at St. Louis University School of Medicine in 1937. Dr. Sertl was a member of the St. Louis Metropolitan Medical Society.

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.**, P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Eli Lilly 730

Forrest T. Jones 757

Fred S. James 764

Jackson & Coker 774

Medical Defense Associates 738

Medical Protective Company 758

MOMEDICO 726

Palisades Pharmaceuticals 777

PIE Mutual Insurance Company 778

Prudential-Bache Securities 766

Risk Control Associates 762, 763

Roche 779, 780

Spectrum Emergency Care 763

Strategic Care 732, 740

United Missouri Bank 728

Wes Woodbury 774

Missouri Physicians' Health Committee

Jack Croughan, M.D.
Medical Director
1034 S. Brentwood, #970
St. Louis, MO 63117
314/725-4004
answering service 314/768-4990.

Carl Pearman, M.D.
Chairman
1443 N. Robberson, #803
Springfield, MO 65802
417/885-4191

Karen Sanders, BSN, RN
Program Coordinator
3839 Lindell Blvd.
St. Louis, MO 63128
314/768-4990

Thomas M. Ahmann, M.D.
Landmark Building
Mexico, MO 65265
314/581-7582

Thomas R. Anderson, M.D.
204 Berrywood Medical Arts Bldg.
3401 Berrywood Drive
Columbia, MO 65201
314/449-2661

Hugh C. Barlett, M.D.
1100 W. 10th, #270
Rolla, MO 65401
314/364-7610

Jack Carmody, M.D.
10004 Kennerly Road, #386B
St. Louis, MO 63128
314/843-2151

James R. Criscione, Jr., M.D.
3825 S. Kingshighway
St. Louis, MO 63109
314/352-7003

Edward C. Felker, III, M.D.
1118 N. Main
Sikeston, MO 63801
314/471-6992

Edward M. Grim, M.D.
3105 McClelland Blvd.
Joplin, MO 64804
417/623-3703

K.P.S. Kamath, M.D.
35 Doctors' Park
Cape Girardeau, MO 63701
314/334-4002

David S. Martin, M.D.
14603 Big Timber
Chesterfield, MO 63017
314/532-9294 or 314/577-8025

Donald McIntosh, M.D.
300 S.W. Green Teal
Lee's Summit, MO 64063
816/537-7344

Jo-Ellyn M. Ryall, M.D.
9216 Clayton Road
Suite 105
St. Louis, MO 63124
314/868-7700

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an ''A'' Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ ____________________

Date of Birth ____________________

Smoker/Non-Smoker (circle one)

Name ____________________

Address ____________________

City/State ____________________

Zip ____________ Phone ____________

Why does JACKSON & COKER *recruit more physicians each year than any other company?*

☐ Largest pool of available physicians in the nation

☐ Network of 7 regional offices nationwide

☐ Expertise that produces unparalleled results in recruiting quality physicians

☐ Proven system that produced over 1,000 placements in the last 3 years.

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

JACKSON
AND COKER

Classifieds

Physicians Wanted

INTERNAL MEDICINE – SPRINGFIELD, Missouri; join expanding 5-physician IM group; diverse primary and critical care practice; affiliation with several major teaching hospitals; modern clinic built 1985; optional teaching activitites; competitive financial package; growing metropolitan population of 230,000 near Ozark mountains; CONTACT: Phil Kelbe, Fox Hill Associates, 250 Regency, Milwaukee, WI 53186. 1-800-338-7107.

EMERGENCY PHYSICIAN – Outstanding opportunity for qualified individual to join incorporated group of three BP/BC emergency physicians in a unique, democratic and thoroughly enjoyable practice. Excellent compensation and complete career opportunities are offered in a very livable community offering a diversity of recreational and cultural pursuits. Call or write Mark Singsank, M.D., NET, PC, Emergency Department, Mercy Health Center, Dubuque, IA 52001.

EMERGENCY MEDICINE IN IL AND MO – Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Thomas Mankiewich or Felicia Hershkowitz, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

INTERNIST – Swope Parkway Health Center has an immediate opening for an Internist to work in our Adult Medicine Department. Swope Parkway is a primary care ambulatory patient care center. We offer comparable salaries and excellent benefits (health insurance, life insurance, pension plan, long term disability and malpractice). For information contact: Cheryl Kelow, Personnel Director, at 816/923-5800 ext. 225.

FAMILY PRACTICE – HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hospital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar opportunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435; 612/835-5123.**

OCCUPATIONAL MEDICINE PHYSICIAN – to join well-established group practice serving over 200 industries. Excellent compensation and full partnership potential. Responsibility include primary care, treating workmen's comp injuries, disability evaluations, medical surveillance, and development and implementation of occupational medical programs for various industries. Should be board certified/eligible, M.D. Send C.V. to: William R. Green, M.D., Macon Medical Center, 7200 Manchester, St. Louis, MO 63143, or call 314/645-7744.

ANESTHESIOLOGISTS NEEDED: Great opportunity for **two BE/BC anesthesiologists** to provide anesthesia services in rural community hospital one hour from St. Louis. Full backup available from St. Louis-based anesthesia group. Most facets of a challenging anesthesia practice including OB are available to satisfy every professional need. Those interested please send CV to: Western Anesthesiology Associates, Inc., 621 S. New Ballas Road, Suite 629, St. Louis, Missouri 63141.

SURGEON OPPORTUNITY. Immediate opening for general surgeon in rural Nebraska. Board certified or board eligible. Must be licensed in Nebraska. Excellent benefits. Great hunting and fishing. Wallace & Panzer, M.D., P.C., 807 N. Ash, Gordon, NE; phone 308/282-1164.

Kaiser Permanente - Kansas City
OB-GYN – BC/BE

Consider the advantage of affiliation with the Kaiser Permanente Program in Kansas City:

- Excellent Salaries/Benefits
- Fully Paid Malpractice Insurance
- Academic Affiliation with Two Tertiary Care Hospitals
- Student Loan Forgiveness Programs
- Malpractice Tail Coverage Considerations For Physicians Currently in Practice
- Family Oriented, Metropolitan Area

Send CV or call:

Larry V. McDonald, M.D.
6900 Squibb Rd., Suite 200
Shawnee Mission, KS 66202
913/384-9090

PRACTICE OPPORTUNITY. Rural Missouri FP currently being operated on part-time basis with excellent full-time possibility. Priced at less than potential one year gross. Includes building with attractive owner financing. Call or write: **Practice Support Resources**, 7001 N. Locust, Suite 202, Gladstone, MO 64118. 1-816/436-6119.

PHYSICIANS NEEDED: Family Practice – Internal Medicine; Oncology – Endocrinology; Neurosurgery – Neurology; General Surgery – Orthopedic Surgery. Group practice, solo, or urgent care settings available through our hospital network located in Macon and serving all of Middle Georgia. Your practice will be located 80 miles south of Atlanta, in a growing family-oriented community, where you can avoid traffic and enjoy a rewarding professional career. Please contact Stephen Wofford at 912/741-6283 for a confidential consultation or write: P.O. Box 4627, Macon, Georgia 31208.

Physicians Wanted

SOUTHEASTERN IOWA – Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

EXCELLENT OPPORTUNITY for an internist to become associated with a 13-physician multi-specialty group located in St. Charles, Missouri. St. Charles is an excellent community to raise a family, excellent school systems, easy access to the St. Louis metro area for recreation, entertainment, with a general service area potential of 120-150,000 residents. Guaranteed first year with excellent fringe benefits and an established practice. Reply to **File #25**, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

INTERNAL MEDICINE: Position open for BC/BE IM physicians to join established multispecialty group with 14 IM physicians and nurse practitioners. Associated with Washington University Medical Center. We offer a competitive salary and excellent benefit package including health, life, A.D. & D., L.T.D., malpractice insurance and an exellent retirement plan. Please contact Dr. Michael Fedak, Health Key Medical Group, 13131 Tesson Ferry, St. Louis, MO 63128. 314/842-4744

FAMILY/ER – Physicians needed immediately to staff our group of walk-in out-patient clinics. No hospital call! Paid malpractice, profit sharing, $50 minimum per hour to start and potential to $120 per hour during busy shifts. Bonus for pilots. Call Sandy McBrayer at 601/328-2525, 8 a.m. to 5 p.m. Monday thru Friday.

PSYCHIATRIST – LINCOLN, NE – Join our team! The nation's largest health care system seeking BC/BE psychiatrist for VA Medical Center acute inpatient area. Must meet English proficiency requirements. Licensure any state. Full range of treatment programs including Mental Hygiene Clinic and Alcohol Treatment Unit. Comprehensive benefit package. Salary negotiable. Lincoln is a university town with small town atmosphere and metropolitan advantages. Lincoln is located in America's heartland and boasts a low cost of living. Videotapes of Lincoln and our facility available for review. Contact Dr. Whitla, 402/489-3802, Ext. 6630, or send CV to Dr. Whitla (116A), VA Medical Center, 600 South 70th Street, Lincoln, NE 68510.

PHYSICIAN WANTED: General/Family Practice. Arkansas low malpractice rates. Semi-rural scenic Ozark Mountain community with major recreation opportunities. Near large lake and trout river. Good schools. Attractive hospital. Active medical practice seeking a Family Physician. Investment required. Reply to: **File #35**, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

FAMILY PRACTICE PHYSICIAN – to join well-established group practice in St. Louis County. Must be Board Certified or Eligible for Family Practice. Excellent compensation and full partnership potential. No obstetrics. All the cultural activities of a metropolitan area available but still has midwestern flavor of life. Send C.V. to: William R. Green, M.D., Macon Medical Center, 7200 Manchester, St. Louis, MO 63143, or call 314/645-7744.

HEALTHLINE PHYSICIAN SERVICES, an affiliate of St. Louis University Medical Center, is recruiting for an Emergency Department Medical Director and Staff Physicians at Hannibal Regional, Hannibal, Missouri. Growth-oriented program in historic Missouri river town. Good compensation, benefits, paid liability. Part-time Emergency Department and locum tenens also available in Eastern Missouri and Southern Illinois. Contact William J. Salmo, HealthLine Physician Services, 3663 Lindell Blvd., Suite 410, St. Louis, MO 63108; 1-800-443-3901.

SOUTH CENTRAL COLLEGE COMMUNITY – Busy successful internist in South Central college town needs associate. Excellent income potential. Service area of 100,000+. Community has almost every convenience of a big city and every comfort of a small town. Listed among 50 cities in the latest issue of "The Best Towns in America." Exceptional schools, housing, climate, hunting, water sports. One hour to major metro area. For more information, call Dawn O'Steen at 1-800-221-4762 or collect at 404/354-8811.

EMERGENCY ROOM PHYSICIAN – Immediate opportunity for physician to work in well-equipped emergency room. Three to four 24-hour shifts per week with hourly pay and malpractice coverage provided. Will be rotating shifts with present ER Physician who has worked in this capacity at the hospital for more than ten years. ER is located in Cameron Community Hospital, a 57-bed acute care General Hospital located in Cameron, Missouri, 50 miles north of Kansas City, Missouri, on I-35. Cameron is a progressive city with a population of approximately 5,000 and good growth prospects. The hospital serves a population base of around 20,000 people, with five ambulance services feeding the ER. ER volume is 3,600 encounters per year. Interested physicians should contact:

BC/BE INTERNISTS AND FAMILY PRACTITIONERS

A balanced lifestyle, competitive income and freedom to practice quality medicine. Opportunities to join a unique primary care practice in the Chicago/St. Louis areas. Excellent financial package includes income guarantee, bonus incentive and potential for profit sharing. No billing or HMO headaches.

Send C.V. to:

Lori Jones
MedFirst Medical Management, Inc.,
5515 North Cumberland Avenue,
Suite 808,
Chicago, Illinois 60656.
Or call COLLECT: (312)774-3443.

MedFirst Medical Management, Inc. — PRIMEDICAL Physician Care Centers
CHICAGO — **ST. LOUIS**

J. Phil McClure, D.O., Cameron Community Hospital, Inc., 1015 West Fourth Street, Cameron, MO 64429. 816/632-2101.

Investment

$5,000-$60,000: FOR PHYSICIANS — Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Equipment for Sale

FOR SALE AT A SACRIFICE. 1) Three Ritter full power Proctology Tables; 2) One Wall or Push Cart Type Bantam Bovie Electrocautery; 3) An assortment of Proctological Instruments. Excellent Condition. Very Reasonably Priced. Telephone: 314/335-8725.

Practice for Sale

FAMILY PRACTICE/OFFICE BUILDING FOR SALE. With equipment & furnishing in South St. Louis County; for immediate continuous practice, option to buy building. 1300 sq. ft. office space on approximately 1/2 acre lot with 15-car parking lot. Price negotiable. Send inquiry to: **Midwest Management**, P.O. Box 31516, St. Louis, MO 63131.

FOR SALE, GENERAL PRACTICE, gross $200,000/year; 90% third party pay. Retiring after 40 years successful medical practice. Solo or group. Fully equipped brick medical building with income from rentals, also for sale, or rent with option to buy after 1 year. St. Louis Suburb, P.O. Box 5711, St. Louis, MO 63121.

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

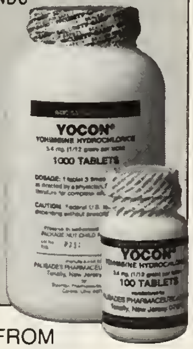
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

PIE's quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. PIE Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

QRP FACTS:

Strict Underwriting Criteria – Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

Scheduled Premium Reductions – Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

High Limits – Backed by our reinsurer, Lloyd's of London, PIE is able to offer higher coverage limits for qualifying doctors: up to $7 million for individual doctors and $13 million for group policies. Lloyd's of London is the largest reinsurer in the world.

Designed With Input from Doctors – PIE's QRP plan is an innovative modified claims-made insurance specially designed with input from PIE-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your PIE representative, or our headquarters office today.

The PIE Mutual
Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth Street
Cleveland, OH 44114
(216) 781-1087

Mutual
Insurance
Company
PIE

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410
(800) 821-5401

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

SOMETHING TO THINK ABOUT...

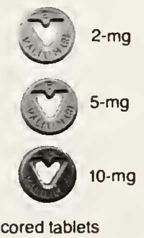
THE PRACTICE,
THE PATIENTS,
THE PRESCRIPTIONS
ARE YOURS.

KEEP THE PRESCRIBING DECISION YOURS, TOO.

SPECIFY: DISPENSE AS WRITTEN

VALIUM®
brand of
diazepam/Roche Ⓘⓥ

The cut out "V" design is a registered trademark of Roche Products Inc.



YOUR CHOICE ALL ALONG!

ROCHE®
Roche Products

Roche Products Inc.
Manati, Puerto Rico 00701

Copyright © 1989 by Roche Products Inc. All rights reserved.

SOMETHING TO THINK ABOUT...

THE PRACTICE,
THE PATIENTS,
THE PRESCRIPTION
ARE YOURS.

KEEP THE PRESCRIBING DECISION YOURS, TOO.

SPECIFY: DISPENSE AS WRITTEN

VALIUM®
brand of
diazepam/Roche Ⓘⓥ

The cut out "V" design is a registered trademark of Roche Products Inc.

2-mg
5-mg
10-mg

scored tablets

YOUR CHOICE ALL ALONG!

ROCHE®
Roche Products

Roche Products Inc.
Manati, Puerto Rico 00701

Copyright © 1989 by Roche Products Inc. All rights reserved.

EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Missouri Medicine

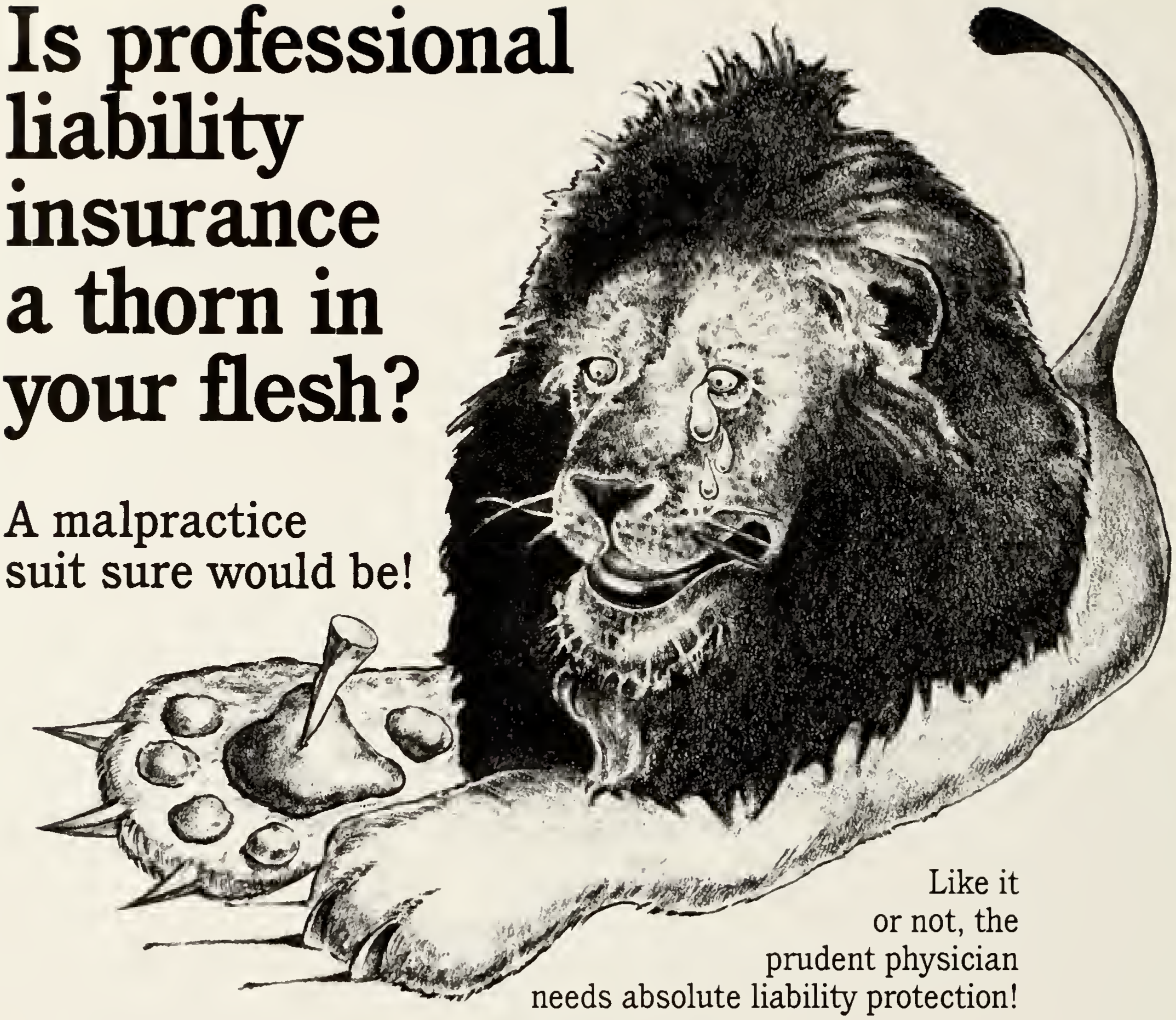
Journal of the Missouri State Medical Association December 1989

EXCHANGE OFFICE
FRANCIS COUNTWAY LIB OF MED
10 SHATTUCK ST.
BOSTON, MA 02115

Happy Holidays

Is professional liability insurance a thorn in your flesh?

A malpractice suit sure would be!



Like it
or not, the
prudent physician
needs absolute liability protection!

But do you need the disruption of your practice that seems to be part of the process of selecting and maintaining appropriate coverage? *It's enough to make you roar in frustration!*

MOMEDICO ends needless frustration and disruption with straight talk . . . clear, concise diagnosis and prescription that a physician can understand. No extravagant promises or industry jargon . . . just clear communication about professional liability insurance at appropriate premiums, in a manner which is responsive to the individual needs and reputations of the physicians MOMEDICO serves.

You don't need a "thorn in the flesh"! . . . you need MOMEDICO!

For straight talk about your professional liability insurance call today!

MOMEDICO

Better Protection. Together.

10795 Watson Road, St. Louis, Missouri 63127
314-965-1003 or Toll Free 1-800-392-8039

Jefferson City Office, 113 Madison
Jefferson City, Missouri 65101,
314-634-8090

Kansas City Office,
9229 Ward Parkway, Suite 290
Kansas City, Missouri 64114,
816-363-6161

Founded and sponsored by the Missouri State Medical Association

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA
DEC 19 1989

Contents

Missouri Medicine

Editor	Donald G. Sessions, M.D.
Associate Editor	Ramona M. Chapman, M.D.
Editor Emeritus	Jordan W. Burkey, M.D.
Managing Editor	Susan Flanigan Gold
Editorial Assistant	Valerie A. Peters

Editorial Board

Anesthesiology	Mark G. Zukaitis, M.D.
Cardiovascular Surgery	Jack J. Curtis, M.D.
Dermatology	Philip C. Anderson, M.D. John DeSpain, M.D. Ernest Lorenc, M.D.
Emergency Medicine	David M. Trantham, M.D.
Family Practice	William D. Bradshaw, M.D. Carl R. Kruse, M.D. Kirby L. Turner, M.D.
Gastroenterology	Jay P. Marshall, II, M.D.
Hematology	William H. Crosby , M.D.
Internal Medicine	John S. Daniels, M.D. Stephen Hamburger, M.D. Robert K. Skillman, M.D.
Neonatology	Elizabeth J. James, M.D.
Neurosurgery	Keith Rich, M.D.
Obstetrics and Gynecology	James Daly, M.D.
Oncology	Michael C. Perry, M.D.
Ophthalmology	John C. Hagan, III, M.D. F. Thomas Ott, M.D.
Orthopedics	William P. Thorpe, M.D.
Otorhinolaryngology	J. Regan Thomas, M.D.
Pathology	Scott A. Martin, M.D.
Pediatrics	R. Don Blim, M.D.
Physical & Rehabilitation Medicine	Martin B. Wice, M.D.
Plastic Surgery	Leroy Young, M.D.
Psychiatry	William F. Clary, M.D. J.C. Corvalan, M.D.
Radiation Therapy	MacDonald B. Logie, M.D.
Radiology	Donald R. Germann, M.D.
General Surgery	Mark S. Cotner, M.D. Richard O. Craig, M.D. Donald Silver, M.D. Michael Metzler, M.D.
Vascular Surgery	Kirt Nichols, M.D.
Urology	George M. Austin, M.D.

Publications Committee

Chairman	Donald G. Sessions, M.D.
Vice-Chairman	Ramona M. Chapman, M.D.
Members	Jack J. Curtis, M.D. John S. Daniels, M.D. Stephen Hamburger, M.D.

Cover

"Advertisement for Sherwin-Williams Paint Co." by **Rockwell Kent.** This painting, a 5½" X 7" Gouache on cardboard done in 1940, belongs in the private collection of **Harry B. Cohen, M.D.**, a Mexico, Missouri anesthesiologist.

Guest Editorial

787 **A Health Care Proposal: Universal Access With Fiscal Responsibility**
Peter G. Tuteur, M.D., *St. Louis, Missouri*

Special Series

801 **Laboratory Diagnosis of HIV Infection**
Gregory A. Storch, M.D., and Max Q. Arens, Ph.D.
St. Louis, Missouri

Scientific Articles

804 **Initial Results of a Program in Liver Transplantation**
John J. Brems, M.D., Lou Ann Biermann, R.N.,B.S.N., Shobha Joshi, M.D., Robert E. Kane, M.D., Michael E. Hayak, M.D., Paul J. Garvin, M.D., and Donald L. Kaminski, M.D.
St. Louis, Missouri

809 **Breast Cancer Incidence Among Women in Missouri: Implications for Cancer Control**
Jian C. Chang, Ph.D., Sherri G. Simms, M.S.N., R.N., James R. Davis, M.S., and Ross C. Brownson, Ph.D.
Columbia, Missouri

815 **Neurological Application of Botulinum Toxin**
Parveen Kumar, M.D., and William J. Crowley, Jr., M.D.
Columbia, Missouri

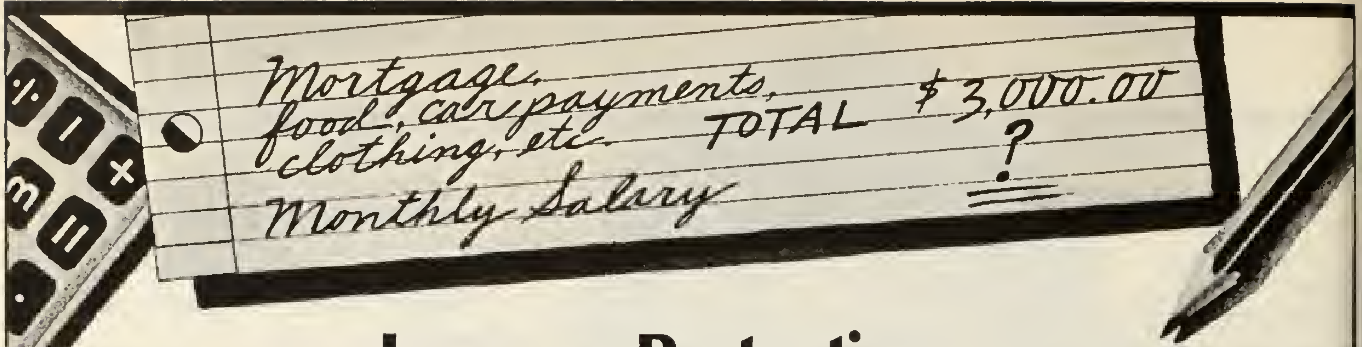
Special Information

818 **1989-90 MSMA Policy Manual**

825 **Proposed Changes in the MSMA Constitution and Bylaws**

Departments

791 Editor's Desk
793 President's Page
797 Auxiliary Message
799 Practice Management
827 CME
833 New Members
834 In Memoriam
835 Medical School News
839 Physician's Recognition Awards
844 Information for Contributors
844 Advertising Index
845 Classifieds
848 Index to Volume 86


Mortgage, food, car payments, clothing, etc. TOTAL $3,000.00
Monthly Salary ?

Income Protection That Keeps Working When You Can't

Your health isn't the only casualty of unexpected disability. Your income suffers too. And financial headaches are the last thing you need when you're disabled.

You may not be able to prevent a disabling accident or sickness. But you can protect your financial security with Disability Income Insurance. It provides a steady, continuing income when you can't.

As a member of the Missouri State Medical Association, you can apply for coverage that can be more economical than an individual policy.

Your MSMA sponsored insurance
programs offer you coverage and
cost advantages!

THE NEW IMPROVED DISABILITY INCOME PLAN SPONSORED BY MSMA FOR ITS MEMBERS

For full particulars, the Administrators invite you to call or write today.

detach here and mail

Mail to: **James**
FRED.S.JAMES&CO.OFMISSOURI,INC.
Missouri Administrator
212 S. Central Ave., Suite 300
Clayton, MO 63105
(314) 863-7777
1-800-445-9513

Your Representative is:
Jack M. Moore, Jr.

Serving MSMA
Since 1943

Please send me a brochure and application for the Missouri State Medica
Association sponsored plan(s) I've checked below. I understand there is abso
lutely no obligation.

☐ Personal Disability Income
☐ Office Overhead Expense
☐ Hospital Indemnity Plan
☐ Accidental Death & Dismemberment Insurance

Name ______________________________

Address ______________________________

City ______________ State ______________ ZIP ______________

Phone: ( ) ______________ Best time to call: ______________

Continental Insurance

Commercial Insurance Company of Newark, N.J.
80 Maiden Lane, New York, N.Y. 10038

Missouri Medicine

Vol. 86, No.12 *Journal of the Missouri State Medical Association* December 1989

MSMA PHONE BOOK

Missouri State Medical Association
314/636-5151
FAX
314/636-8552
American Medical Association
312/645-5000
MSMA Physicians' Health Program
314/768-4990
MOMEDICO
1-800-392-8039
Dodson Insurance Group
1-800-825-3760
Forrest T. Jones
1-800-892-7272
Fred S. James
KC 1-800-892-7105
St. Louis 1-800-445-9513
Health Care Financing Administration
816/426-5233
INTRAV
314/727-0500
Medicaid Provider Relations
1-800-392-0938
Medicare Provider Relations
1-800-392-3070
Medicare Part B Blue Cross Blue Shield
Kansas City
1-800-654-9629
Missouri Department of Health
314/751-6400
Missouri Department of Social Services
314/751-2086
Missouri Patient Care Review Foundation
(Preadmission) 1-800-392-8060
(General info) 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs
314/751-8042
Missouri State Board of Registration of the Healing Arts
314/751-2334

MSMA Officers

President	Marvin A. Singleton, M.D., *Joplin*
President-Elect	Gary A. Dyer, M.D., *St. Joseph*
Secretary	Norman P. Knowlton, III, M.D., *Springfield*
Treasurer	Harry O. Cole, M.D., *Chesterfield*
Vice President	Clarence A. Martin, M.D., *Joplin*
Vice President	Jack Kayes, M.D., *St. Louis*
Vice President	Barbara Buchanan, M.D., *Kansas City*
Speaker	Jo-Ellyn M. Ryall, M.D., *St. Louis*
Vice-Speaker	James B. Wolfe, M.D., *Springfield*

Councilors

Dorothy D. Reister, M.D., *Shawnee Mission,* Chairman
Carol F. Williams, M.D., *St. Louis*, Vice Chairman

Stephen Vilmer, M.D., *Shawnee Mission, KS*
Robert V. Tompson, M.D., *Moberly*
William H. Huffaker, M.D., *St. Louis*
J. Otto Lottes, M.D., *St. Louis*
Arturo Montes, M.D., *Florissant*
Frederick D. Peterson, M.D., *St. Louis*
David Wilkinson, M.D., *St. Louis*
J. Michael Conoyer, M.D., *St. Peters*
Alan L. Braun, M.D., *Jefferson City*
Jerry Murrell, M.D., *Columbia*
A.J. Campbell, M.D., *Sedalia*
Frederick W. Hahn, M.D., *Kansas City*
Robert T. Gibbons, Jr., M.D., *Overland Park, KS*
David W. Hall, M.D., *Rogersville*
Duane Hellam, M.D., *Springfield*
David O. Barbe, M.D., *Mountain Grove*
Melvin C. Kasten, M.D., *Cape Girardeau*
Ms. Laura Carlson, medical student, *Kansas City*
Charles Barbee, M.D., *Columbia*
Charlene Prather, M.D., *Kansas City*

Vice Councilors

Robert Schaaf, M.D., *Gower*
Carl R. Kruse, M.D., *Palmyra*
Meredith C. Payne, M.D., *St. Louis*
Sammy L. Farrell, M.D., *Washington*
Ruth Kauffman, M.D., *Versailles*
Jerry Meyer, M.D., *Concordia*
Jay Yedlin, M.D., *Kansas City*
Robert Brigden, M.D., *Joplin*
Thomas R. Stubbs, M.D., *West Plains*
William C. Shell, M.D., *Sikeston*
Ms. Lora Mills, medical student, *Columbia*
Paul Petruska, M.D., *St. Louis*
Carla Siegfried, M.D., *St. Louis*

AMA Delegates

Keith Ashcraft, M.D., *Kansas City*
Vernon Balster, M.D., *St. Louis*
George Bohigian, M.D., *St. Louis*
Walter German, M.D., *Springfield*
Melvin C. Kasten, M.D., *Cape Girardeau*
Robert R. MacDonald, Jr., M.D., *St. Louis*
Hugh E. Stephenson, Jr., M.D., *Columbia*

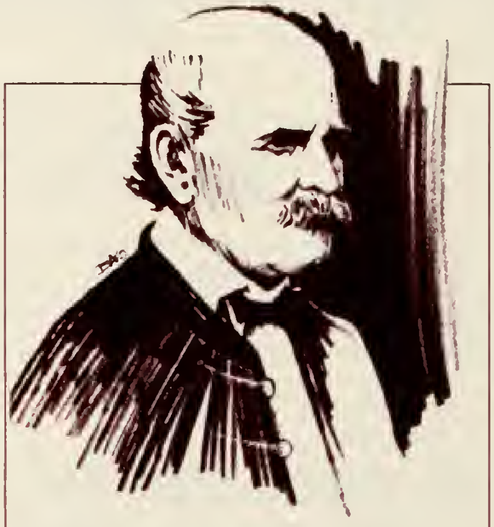
Printing Office: The Ovid Bell Press, Inc., Fulton 65251
Missouri Medicine (ISSN 0026-6620) is published monthly by the Missouri State Medical Association, P.O. Box 1028, 113 Madison St., Jefferson City, MO 65102.
Subscription rates: $20 per year.
Second class postage paid at Jefferson City, Missouri and at additonal mailing offices.
Postmaster: Send address changes to Missouri State Medical Association, c/o Membership Dept., P.O. Box 1028, Jefferson City, MO 65102.

The articles published in *Missouri Medicine* represent the opinions of the authors, and do not necessarily reflect the official policy of the Missouri State Medical Association.
Copyright 1989 by the Missouri State Medical Association. All rights reserved. Publication number 355380.

POOR MARKETING DROVE SEMMELWEIS INSANE.

Poor marketing communications skills have always been detrimental to physicians. Take the case of the great Hungarian physician Ignaz Phillip Semmelweis (1818 to 1865). He suffered more than most.

Ironically, the medical community washed its hands of Semmelweis, the physician who instructed his colleagues that disinfecting their hands with calcium chloride solution before surgery saved lives.



Ignaz Phillip Semmelweis (1818-1865) discovered that puerperal infection was reduced when surgeons disinfected their hands.

His findings, which he presented in an unacceptable fashion, were met with skepticism and rejection by the medical community. Semmelweis's sensitive nature crumbled under the ridicule and he eventually lost his mind.

Today, *StrategiCare* helps physicians to achieve success in both health care and in business. *StrategiCare* integrates the essential aspects of business to help physicians succeed.

BUSINESS DEVELOPMENT • BUSINESS FORMS • COMPUTER SYSTEMS
FURNISHINGS AND DESIGN • MANAGEMENT SERVICES• PERSONNEL SERVICES

Bringing Business Solutions to Health Care

StrategiCare®
INC.

4500 Main, Suite 900 • Kansas City, Missouri 64111
For more information, contact Theodore Boesen, 816-932-5357 or 800-879-1879

GUEST EDITORIAL

by Peter G. Tuteur, M.D.

We are faced with a moral imperative to allow all Americans financial access to our health care system. Outlined here is a plan that permits the private and public sectors to share responsibility in a fiscally sound way.

A Health Care Proposal: Universal Access With Fiscal Responsibility

It is the goal of this paper to outline a fiscally responsible plan to provide access to quality health care for all Americans. National expenditures for health care already approach $600 billion annually and comprise nearly 12% of the gross national product (GNP). Yet, in the USA, 37 million persons lack either third party coverage or personal funds to pay for quality health care; half of these persons are employed. The dilemma: how can we extend universal access to quality health care while simultaneously containing health care costs? These two health care policy goals seem almost incompatible.

Background

Since the Hill-Burton legislation of the 1940's, a proliferation of employer-paid health care plans has emerged; first, there was indemnity hospitalization coverage; next, benefits were broadened to the ambulatory setting; and finally, variety and choice in plan structure was introduced. Progressively more of the labor force have obtained financial access to health care.

Medicare legislation in 1965 improved access to health care for retired seniors. Medicaid, the public financial health plan for the poor, was not as successful in covering its targeted audience. Fifteen to 20 million unemployed and under-employed persons failed to meet Medicaid's eligibility standards. Even some beneficiaries found that funding was inadequate to provide them with financial access to their local health care system. Moves to improve coverage for the medically indigent and to broaden eligibility among the poor were blocked by both federal and local budgetary constraints.

In the late 1970's Paul Elwood observed that alternate delivery systems such as HMO's improved efficiency of health care delivery. He reasoned that prospectively paid comprehensive health care provided by alternate delivery systems (ADS) could be stimulated to control costs by allowing informed consumers to purchase annual health care plans in an open marketplace. In Congress, supporters encouraged "competititon," subsidized HMO research and development, and proposed bills designed to increase consumer sensitivity to costs. A most comprehensive plan was authored by Richard A. Gephardt (D-MO) and David Stockman (R-MI) in 1980. An important provision set a limit on tax exempt employer contributions to health care plans (tax cap).

Experience with ADS in the early 1980's demonstrated how a shift of many health services from the in-patient to the out-patient setting could reduce costs without reducing the quality or outcome of the service. Thereafter, this practice pattern was accepted widely by payers and providers. However, the implementaton of other money-saving techniques was associated with increased administrative costs that offset additional savings. The medically-indigent still could not

continued on page 788

continued from page 787

afford care. Persons not members of large employee groups often were not offered employer purchased group plans and could not afford to pay with after-tax dollars the higher premiums charged to the individual. Their access was limited.

Recently, with health care costs accelerating at twice the general inflationary rate, employers have found it increasingly difficult to fund unlimited health benefits. Yet, employee demand for comprehensive coverage continues. It is stimulated by the perverse incentive of the tax exempt status of all employer contributions. Also a factor is the perception that health care is a right, often secured through hard-fought negotiation. Furthermore, the government's failure to tax even a portion of employee benefits is a governmental expenditure that is rarely appreciated to be what it is, a direct cost to the public sector. Indeed, in tax year 1987, the Congressional Budget Office (CBO) estimated that such so-called tax expenditures totaled $46 billion. If a Gephardt-Stockman tax cap provision were to be adopted, more than just additional tax revenues that could be used to pay for health care would result. Consumers whose employer contributed in excess of the tax cap now would be faced with two choices: either reduce coverage by accepting responsibility for health policies with co-pay and deductibles, or pay for more coverage with taxable dollars. With either approach, Gephardt and Stockman believed that consumers would become more cost-conscious and would force delivery systems into a more competitive market.

Some policy makers regularly suggest setting a limit on the relationship of expended health care dollars to GNP. But as the health cost:GNP ratio has increased, so has the expert's proposed limit, from 9% to 12%. Significantly, few propose such limits for dental care, legal services, automobiles or VCRs. The difference is that such goods and services are purchased with private out-of-pocket dollars. One infers that the health policy makers' concern is with a limit on health care costs paid for by government and corporations. The individual consumer may choose to modify these limits at the margin using personal after-tax funds. According to a February, 1989 CBO report, if one were to place a $3000 limit on the tax deductibility of employer contribution toward the premiums of an annual health care plan for a family, by 1994 there would be a $20.5 billion annual increase in federal tax revenues. These funds would be derived from increased personal income tax payments by about 25% of the work force receiving such rich benefits. Interestingly, these added revenues approximate the amount needed to provide a standard minimum health care package for all under-employed medically indigent Americans not eligible for Medicaid.

Today, 37 million Americans still do not have financial access to the health care system. One argument against actively addressing this issue is that care already is provided to this group, particularly for serious illnesses. Why, then, formalize this charity? Critics of such a laissez faire approach argue that the funds used to supply this care are unpredictably erratic and are generated by those entities who pay for the care of others. In other words, surplus revenues are collected from some (usually private sector) to cover the costs generated by the underinsured. Such cost-shifting places an unfair burden on the payers. Furthermore, those employers, sometimes large corporations, who do not provide even a basic health care plan for their employees are exploiting, for personal profit, the generosity and the commitment of others. To correct this inequity, some states now require virtually all employers to pay a substantial proportion of the premiums associated with a basic health care plan for their employees. If this were done on a national scale as proposed in legislation written by Senator Edward Kennedy (D-MA) the number of uninsured Americans would be reduced to approximately 17 million. Critics have countered with predictions of bankruptcies among small and marginal businesses and loss of jobs. This argument, often also offered when increase of minimum wage is proposed, has little empirical support.

Proposal

We need a fiscally responsible plan to provide universal access to health care. This can be realized by introducing greater competition in the health care industry, stimulating the consumer to be both cost and quality conscious, and limiting the rate of increase of the public and corporate health care budget.

First, I support national legislation to mandate employer-funded health plans. This will blunt cost-shifting and ensure that the moral imperative be met by all, not just by most. To complete the picture of universal access, I propose that a tax cap be enacted and that all revenues generated by reduced tax expenditure be assigned to fund the health care costs of the remaining 17 million underinsured or uninsurable. These monies should be distributed in the form of a voucher only to be used to purchase an approved and federally-guaranteed basic annual health care plan selected by the recipient. Personal funds may be used to purchase supplemental benefits, if desired. The menu of plans should not only include private sector indemnity plans, HMOs, and other alternative delivery systems, but also an opportunity to "buy into" Medicaid. Such an influx of funds would put Medicaid into the competitive marketplace, thus providing incentive to improve the quality of the product for Medicaid-eligible families, also. The voucher system would place the government in the role of purchaser, not provider and manager, of a national health care system.

This is a two-part proposal: (1) to require virtually all employers to fund, in part, annual health care plans for their employees and (2) to limit the personal income tax exempt status of these contributions. The $20 billion added tax revenues generated by setting a tax cap at $3,000 annually could fund health care plans for the remaining inadequately insured by allowing these Americans to purchase a health care plan of their choosing with a voucher, good for either private or public sector plans. With this approach, (1) the public sector expenditures for health care would be influenced less by the ratio of total health care expenditures to GNP, (2) employee pressure on employers continually to increase their contribution to annual health care plans would be blunted by the elimination of a tax advantage for such marginal expenditures, (3) consumers would become cost sensitive to health expenditures and force the market into a more competitive stance, and (4) access to health care plans would be improved substantially.

Several safeguards are required prior to successful implementation of such a plan: a standard minimum coverage must be defined; eligible annual health care plans must be qualified and federally guaranteed, and co-pays and deductibles must be set at levels meaningful to family income. To encourage prudent decisions concerning tertiary care, some co-pays must be required even for expensive services.

It can be expected that opposition to a tax cap might be encountered from labor groups. This is understandable for these costly health care benefits represent a harvest from many years of negotiations. It must be recognized, however, that increased health care costs driven by plans with limitless benefits and cost-shifting to pay for the underinsured limit corporate profitability, expansion, and development. Such expenditures also limit competitive position in the marketplace and ultimately the number of jobs available for the workforce.

Some argue that mandated insurance is designed by providers to increase monies into the health care marketplace and thus is self-serving. In reality, among the well-insured employed, the demand for luxurious services may decrease as appropriate co-pays and deductibles more commonly are added to health plans. Furthermore, the mandated employer contributions to basic health care plans do more to eliminate cost shifting than to augment the supply of funds to the marketplace. The increased competitition stimulated by the voucher system and the tax cap improves quality and reduces the rate of increase in costs as a result of the creation of a free marketplace where the informed cost-conscious consumer interacts with quality providers.

Conclusion

We are faced with a moral imperative to allow all Americans financial access to our health care system. As a society we seem to be unable to prospectively allocate the funds to realize this goal. Outlined here is a plan that permits both the private and public sector to share responsibility in a fiscally sound way. This will achieve universal access by mandating all employers to follow the majority and contribute appropriately toward health care plan premiums for their employees and by setting a limit on what is tax exempt from personal income tax when employers pay for these health care plans. All additional tax revenues should be assigned to a voucher system permiting the uninsured or uninsurable to select, in a competitive marketplace, the best annual health care plan for themselves. In this way, universal access will be approached, quality care will be encouraged, and health care costs will not break the federal budget. ■

References

Wilensky G: Filling the Gaps in Health Insurance: Impact on Competition. *Health Affairs.* 1988;7:133-149.

Editor's Note: Dr. Tuteur is an associate professor of medicine in the Department of Internal Medicine at Washington University School of Medicine, St. Louis, Missouri.

DISC Offers Extraordinary Guarantee

DISC Systems, a product of StrategiCare, Inc., announces an incredible two-year *satisfaction* guarantee* on its Medical Management Computer System. DISC's guarantee exceeds the industry standard by a long shot. We're so sure you'll be pleased with our system that we'll completely refund your money if you're not.

Most companies selling computer systems offer warranties that promise only service and repair, but the DISC guarantee is different. A customer doesn't have to prove any defect in the system to return it and receive a full refund. That's truly extraordinary.

Carl W. Brandt, President
DISC Computer Systems

*Subject to the terms and conditions of the DISC Systems written warranty.

Discover DISC:
The worry-free choice
SYSTEMS

A product of
StrategiCare®
INC.

4500 Main Street, Suite 900, Kansas City, Missouri, 64111
For more information, contact Carl Brandt, 800/331-4479

NCR DISC is an NCR Value-Added Reseller

MORE THAN **250,000** PATIENTS HAVE ENJOYED HEALTH BENEFITS RESULTING FROM MEDIFAST.

MORE THAN **10,000** PHYSICIANS PRESCRIBE MEDIFAST WITH CONFIDENCE.

MORE THAN **10** YEARS OF DEDICATED SERVICE TO THE MEDICAL PROFESSION.

No Other Physician-Supervised Weight Control Program Delivers This Winning Combination
...and that makes Medifast #1

Physician-Supervised Protein-Sparing Modified Fast For the Safe • Rapid • Medical Treatment of Obesity

Doctor, one of every four of your patients has overweight problems that need medical help...the help of Medifast®.

A comprehensive program for rapid weight loss *and lifelong weight control,* Medifast has proven itself. For more than 10 years! To more than 10,000 physicians! To more than 250,000 patients!

Medifast will work for you, too.

Patients lose weight with a program of physician-supervised modified fasting and behavior modification. And they keep it off with our exclusive *LifeStyles* Program.

TRAINING MANUALS

The Medifast Program includes:

★ *Training* – Comprehensive training manuals written by physicians, for physicians. Address all clinical and administrative aspects.

★ *Medifast Supplements* – Extremely high quality. Medically formulated. Nutritionally complete.

LifeStyles: PATIENT SUPPORT

★ *LifeStyles* – The Medifast Program of Patient Support™. Teaches patients the way to long-term weight control and healthful living.

★ *Clinical Consultation* – Medical and technical support specialists available daily at our toll-free number.

★ *Practice Promotion Portfolio* – Complete with marketing ideas, office displays, posters, waiting room brochures, and advertising.

★ *National Consumer Ad Campaign* – Builds public awareness, creates referrals.

You know, Doctor, that more traditional methods of weight reduction are simply ineffective. And, severe overweight threatens your patient's health. Primary Care Physicians of every specialty recognize Medifast to be an important addition to their prescribed therapy and an effective way to increase their patient base.

PROMOTION PORTFOLIO

For complete information call toll-free

1-800-638-7867

Or write:
The Nutrition Institute of Maryland
William J. Vitale, M.D.
Director, Clinical Services
1840 York Road, Suite H
Timonium, MD 21093

MEDIFAST
The Physicians' Answer to Weight Control.

©Jason Pharmaceuticals 1989

IS YOUR SPECIALTY WORTH AN EXTRA $8,000 A YEAR?

If you are a resident in anesthesiology, orthopedic surgery, or general surgery—which includes neurosurgery, colon/rectal, cardiac/thoracic, pediatric, peripheral/vascular or plastic surgery—you could be eligible for an $8,000 annual stipend in the Army Reserve's New Specialized Training Assistance Program.

Your skills in one of these specialties are worth a lot to us, so we are offering you the opportunity to use them in a variety of challenging settings, from major medical centers to field hospitals. In addition to your salary as an Army Reserve Officer, you will also receive a monthly stipend.

We realize that a resident's schedule is hectic, so we will be flexible about the hours you serve. You could serve as little as two weeks a year now, with a small obligation later on.

If you would like more information about this stipend program, or about other medical opportunities in the Army Reserve, call toll-free, 1-800-USA-ARMY.

ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.

EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

There are obviously no answers that will allow us, as physicians, to handle the breakdowns of all our patients — to address the suffering of all humans.

Chief Complaint

She was the best example of a "walking complaint" that I can remember. She had come into my office with headaches and a review of her somatic systems was positive. Literally nothing had gone her way, was going her way, or would go her way in the future. As I listened to her enumerate her bodily complaints in detail, I was aware of a conversation of my own: "This patient is incurable. Nothing that I can do or say will change her situation." I am increasingly aware that this conversation of mine is my automatic response to feelings of inadequacy regarding my ability to deal with patients' moods. My reaction in fact is itself a mood which has been triggered by my interpretation of the patient's mood.

Patients' complaints are associated with breakdowns in life that show up as somatic symptoms. These symptoms are real in the patient's body. Often when these patients see us in the office they come in having already self-diagnosed their "case." They aren't just afraid they have "cancer, for instance, as "cancer" actually lives in their bodies. The patient's fears center upon disintegration of the self.

Mood has been described as an automatic assessment of future possibility. Mood is a conversation, a linguistic phenomenon, that also resides in the body. As physicians we observe that our patients have many moods. A physician must ask himself if there is some way to alter the mood of patients in breakdown. We ask, "Is there something I can do, or say, or some way I can be that can help this patient?" More often than not, despite our advanced technical competence, we are unable to come up with a medical-scientific answer to the patient's complaints. Are we to throw in the towel? Do we just say "there's nothing wrong with you or there's nothing I can do?" What is it that physicians can offer patients here?

There are obviously no answers that will allow us, as physicians, to handle the breakdowns of all our patients — to address the suffering of all humans. As a beginning, however, it is valuable to go back to some basic questions. What is the job of a physician? What are the responsibilities of patients? What can physicians do to facilitate healing in patients? What is the phenomenon of healing?

We can begin to look at these questions by making a few basic distinctions. We live as if we know the difference between health and disease and yet there are few agreed-upon standards for what is healthy. That is why science-based physicians are a little uncomfortable in discussing wellness. Given our training in the diagnosis and treatment of disease it is helpful to look at the distinction between health, illness and disease. This is discussed effectively in **The Primacy of Caring**, a recent book by Benner and Wrubel.[1] Illness is not identical with disease. Illness is the human experience of loss or dysfunction; disease is the manifestation of abnormality at the cellular, tissue or organ level. Patients may have a disease and yet not experience being ill. Patients seek medical help when they experience a disruption, loss or concern. They see these "symptoms" as an interruption in their life, an inconvenience, or a health worry. Usually

continued on page 792

Editor's Desk

continued from page 791

patients want to have the troubling aspects of the symptom removed or explained in ways that minimize the disruption of their life or take care of the health worry.

The issue is that a disease that matches the symptom may or may not be found. Taking care of the disease does not always handle the illness – that is, it does not automatically take care of what Benner and Wrubel call the human response to the symptom. Illness and disease are not mirror images of each other. Illness cannot be reduced to just a nonscientific account of disease. Benner and Wrubel effectively state that "illness as the human experience of loss or dysfunction has a reality all its own. In the end, all treatment must make sense in terms of the human experience: the efficacy of the treatment will be hindered and suffering will increase when the treatment does not match the patient's understanding of the illness."[2]

We can begin to address these issues by listening to the patient's understanding of the illness. Part of our job is to listen to the concern underneath the complaint. When physicians communicate their caring at this level it is heard by patients as empathy and compassion and is the initial step towards the building of a trusting relationship. We can start doing this when we approach the "Chief Complaint" as the "Chief Concern." ■

References

1. Benner P, Wrubel J: *The Primacy of Caring.* Addison-Wesley Menlo Park, CA 1989.

2. ibid. pp 8-9.

Why does
JACKSON &
COKER
recruit more physicians each year than any other company?

☐ Largest pool of available physicians in the nation

☐ Network of 7 regional offices nationwide

☐ Expertise that produces unparalleled results in recruiting quality physicians

☐ Proven system that produced over 1,000 placements in the last 3 years.

JACKSON AND COKER

(800) 888-0121

With Regional Offices In:

ATLANTA-DENVER-PHOENIX
DALLAS-ST.LOUIS
PHILADELPHIA

President's Page

by Marvin A. Singleton, M.D.
MSMA President

The most significant thing that organized medicine can do is to begin to tell the beneficiaries of Medicare the effects that rationing will have upon receiving their health care through economic disincentives that the federal government and the intermediaries place upon physicians.

Title XVIIII

Federal regulation of the practice of medicine is becoming more apparent and punitive in nature. Section 1862 (A)(1) of Title 19 of the Social Security Act states that payment may be made only if items or services are reasonable and necessary for the *diagnosis* or *treatment* of *illness* or *injury* or to improve the functioning of a malformed body member. The law does not extend coverage to *routine screening* or *preventative services.* The letter's message dealing with what Medicare does not cover is becoming more important in the efforts of the Federal Government to reduce the deficit on the backs of providers of health care and those who receive Medicare benefits. Recently, many doctors across the State of Missouri have been the recipients of a form letter from the Intermediary, General American, on behalf of Part B of the Social Security Act, dealing with payment of claims. It has come as a great surprise to many physicians that a retroactive study is being done by the Intermediary in response to Federal Regulations passed by your and my representatives in Washington, D.C., in an effort to recoup some of the monies lost through the insatiable appetite of Congress. The post-payment reviews of claims for services may extend back three to four years. After a review of claims on a small portion of office charts, they may then extrapolate that an overpayment exists based on this information. They have under federal law the opportunity to then do a full-scale review of these services paid to the individual physicians on assignment benefits. One group of four internists in the state, after such a review, were asked to return $160,000 for a three-year period. Due to the reopening and re-adjudication making services for prevention health and annual physical examinations not covered under Medicare guidelines, the notification letter went further to say "the furnishing of services which are determined to be substantially in excess of the beneficiary's needs or which fail to meet professionally recognized standards of health care is considered an abusive practice under the Medicare Program." Of course an appeal process exists. However, you are guilty until you prove yourself innocent by establishing the need for the services, including copies of all medical records, time spent on the appeal process, and etc., without any compensation in return for same.

What should be the response from organized medicine in these repugnant post-payment reviews? For years, physicians have had to put up with delays in payments, bad claims versus clean claims (those with inaccurate procedural codes), and the repeated and insistent attitude of the Intermediaries for lesion sizes; all obstacles set up by either the Intermediaries or the Federal Government itself to delay payments for services rendered. Surely if there were any questions about the claims in the first place, payment should have been withheld and questions asked at that time. The principle that physicians are guilty until proven innocent certainly must be rectified, and probably the most significant thing that organized medicine can do is to begin to tell the beneficiaries of

continued on page 794

President's Page
continued from page 793

Medicare the effects that rationing will have upon receiving their health care through economic disincentives that the Federal Government and the Intermediaries place upon the physicians. The fact that the Racketeer Influenced and Corrupt Organization Act which mandates that alleged overcharges be tripled as fines, certainly should be made known to the recipients as well. The fact that forgiveness of a co-payment cannot only result in a fine to the physician or a prison penalty, the fact that even any remaining approved balance owed by a Medicare recipient must be billed for the difference. Now third party payers and insurance companies are also insisting that physicians follow the lead of Medicare requiring charges on a claim form represent actual charges and that patients be required to pay amounts such as coinsurance and deductibles.

The other answer, of course, with respect to what organized medicine can do, is to become aware of the fact that the practice of medicine in your office and clinical setting is influenced by what happens in the state capitol as well as in Washington, D.C. Active participation in health care matters can be done through support of political candidates running for political office, through your state medical association, and the AMA. Participation in the medical political action committees certainly is a vital part of shaping the future health care horizons. Your federal and state representatives *must* hear from you in order to form their opinions and represent you. Communication is a very important part of any organized activity and communication with federal and state officials, copying the president of the state association and headquarters in Jefferson City helps us in organizing a broad-based response to various federal and state actions.

In a related concern dealing with Medicare is the recent action of the Silver Haired Legislature of Missouri, which is a group of 135 elderly, elected from across the state through the Area Agency on Aging to represent and advocate issues of the elderly. The second priority bill of the Silver Haired Legislation calls for mandated acceptance of Medicare assignment for Medicare patients by all Missouri doctors. When I gave testimony before the Consumer Affairs Committee of the Silver Haired Legislature, the committee voted not to support this bill. However, when the entire Silver Haired Legislature met, they brought the bill up from the floor, and it was passed as their number two priority bill. It will be introduced in the Missouri Assembly for consideration this next spring. Unfortunately, the people who voted for this action did not hear the testimony, and those who did hear the testimony voted not to mandate acceptance of Medicare assignment. Presently in Missouri, 63% of all Medicare claims are submitted on assigned basis. Forty percent of all Missouri physicians accept assignment on all Medicare patients. This is the time to become involved with elected officials and make your sentiments and wishes known to them. It is difficult to practice good medicine, put shoes on your children's feet, and look over your shoulder to see if all the racket you are hearing is due to a herd of elephants in back of you. ■

EAT RIGHT, LIVE LONG AND PROSPER.

EATING RIGHT IS HIGHLY LOGICAL.

Recommendations:
Eat high-fiber foods, such as fruits, vegetables, and whole grain products. Eat fewer high-fat foods. Maintain normal body weight. And live long and prosper.

CALL THE AMERICAN CANCER SOCIETY AT 1-800-ACS-2345 FOR FREE NUTRITION INFORMATION.

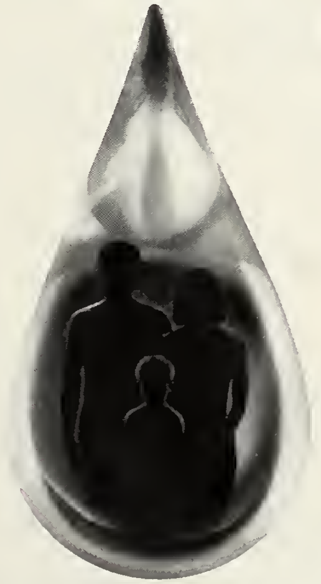
AMERICAN CANCER SOCIETY®

STAR TREK ® & © 1989 PARAMOUNT PICTURES CORPORATION ALL RIGHTS RESERVED. THE AMERICAN CANCER SOCIETY AUTHORIZED USER.

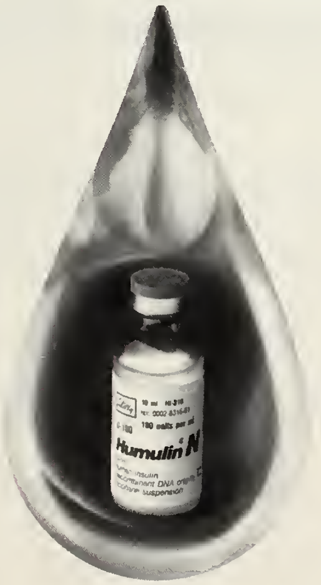
For treatment of diabetes:

Introducing
Humulin® 70/30
70% human insulin isophane suspension
30% human insulin injection
(recombinant DNA origin)

REPLACE
Human Insulin



With Human Insulin

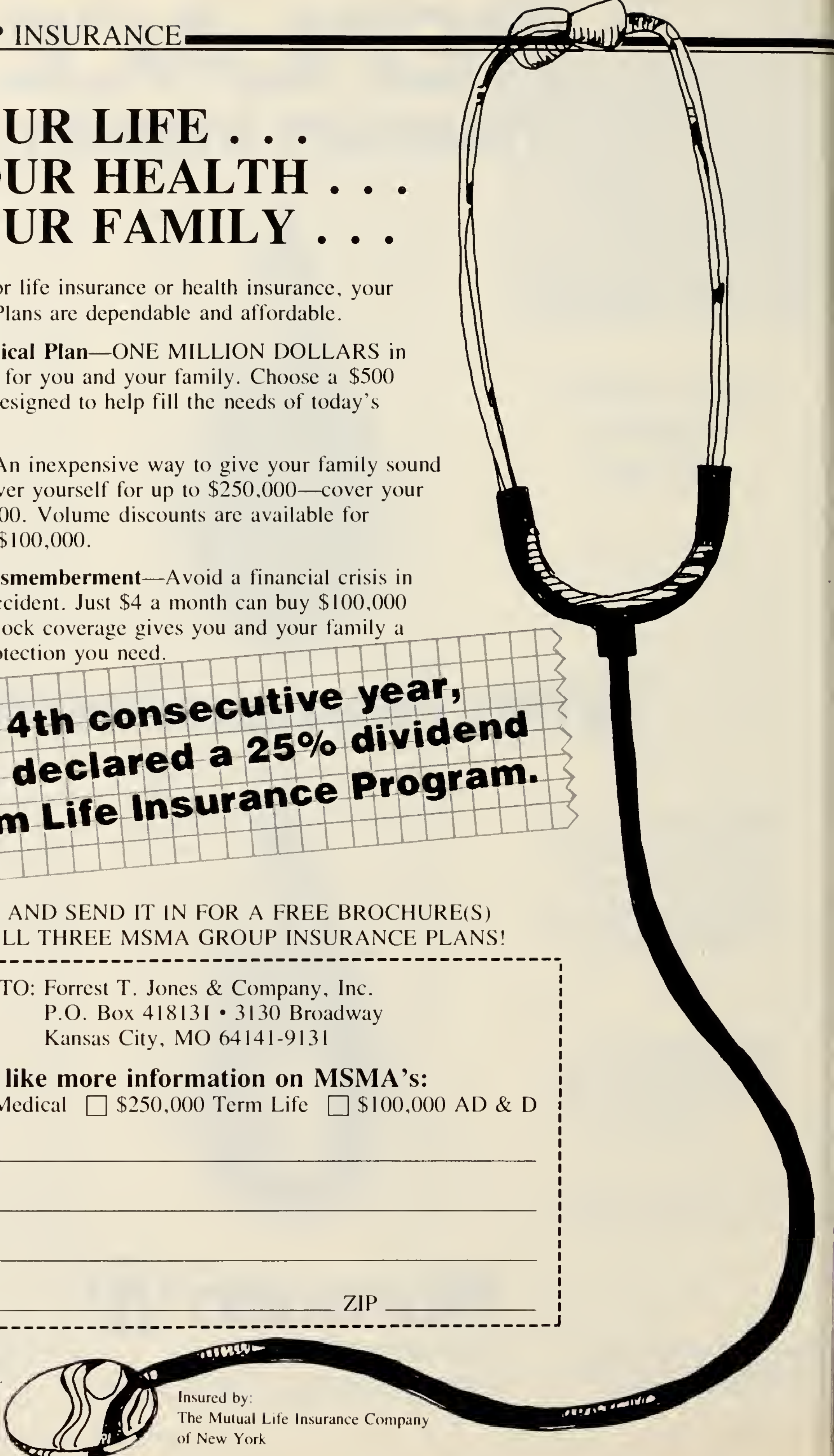


Humulin®
human insulin
(recombinant DNA origin)

Any change of insulin should be made cautiously and only under medical supervision.

Lilly

Leadership
In Diabetes Care



MSMA GROUP INSURANCE

FOR YOUR LIFE . . .
FOR YOUR HEALTH . . .
FOR YOUR FAMILY . . .

Whether you're looking for life insurance or health insurance, your MSMA Group Insurance Plans are dependable and affordable.

- **$1,000,000 Major Medical Plan**—ONE MILLION DOLLARS in solid medical protection for you and your family. Choose a $500 or $1,000 deductible. Designed to help fill the needs of today's medical professional.
- **$250,000 Term Life**—An inexpensive way to give your family sound financial protection. Cover yourself for up to $250,000—cover your spouse for up to $100,000. Volume discounts are available for coverage amounts over $100,000.
- **Accidental Death & Dismemberment**—Avoid a financial crisis in the event of a serious accident. Just $4 a month can buy $100,000 protection. Round the clock coverage gives you and your family a large measure of the protection you need.

For the 4th consecutive year, MONY has declared a 25% dividend on the Term Life Insurance Program.

CLIP THIS COUPON AND SEND IT IN FOR A FREE BROCHURE(S) ON ONE, TWO OR ALL THREE MSMA GROUP INSURANCE PLANS!

MAIL TO: Forrest T. Jones & Company, Inc.
P.O. Box 418131 • 3130 Broadway
Kansas City, MO 64141-9131

YES! I'd like more information on MSMA's:

☐ $1,000,000 Major Medical ☐ $250,000 Term Life ☐ $100,000 AD & D

NAME ______________________________

ADDRESS ______________________________

CITY ______________________________

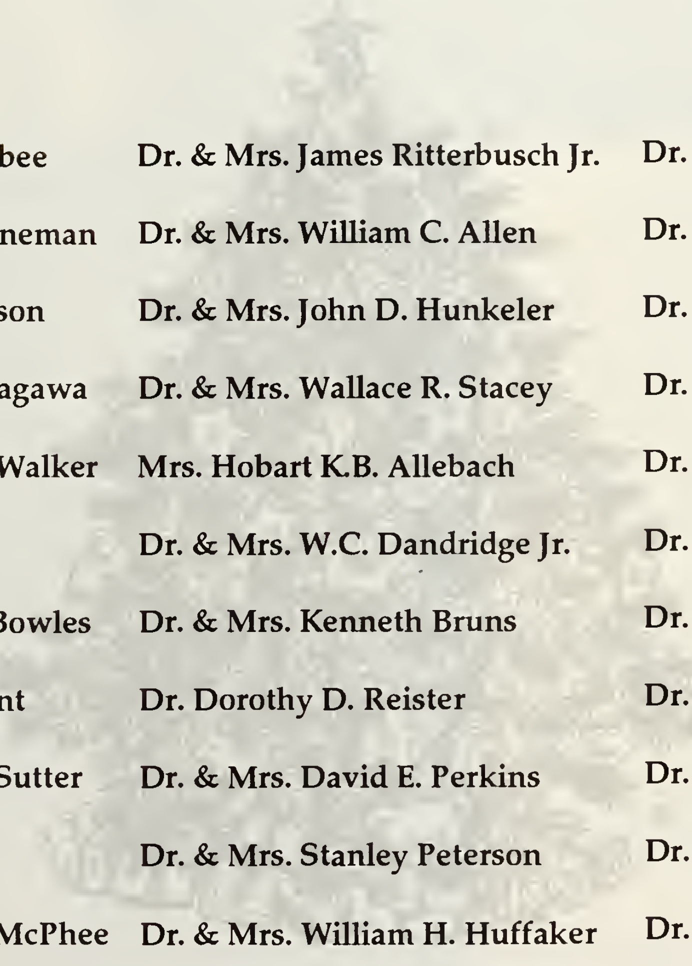
STATE ______________________ ZIP __________

Administered by:
Forrest T. Jones & Company, Inc.
P O. Box 418131
3130 Broadway
Kansas City, Mo 64141-9131

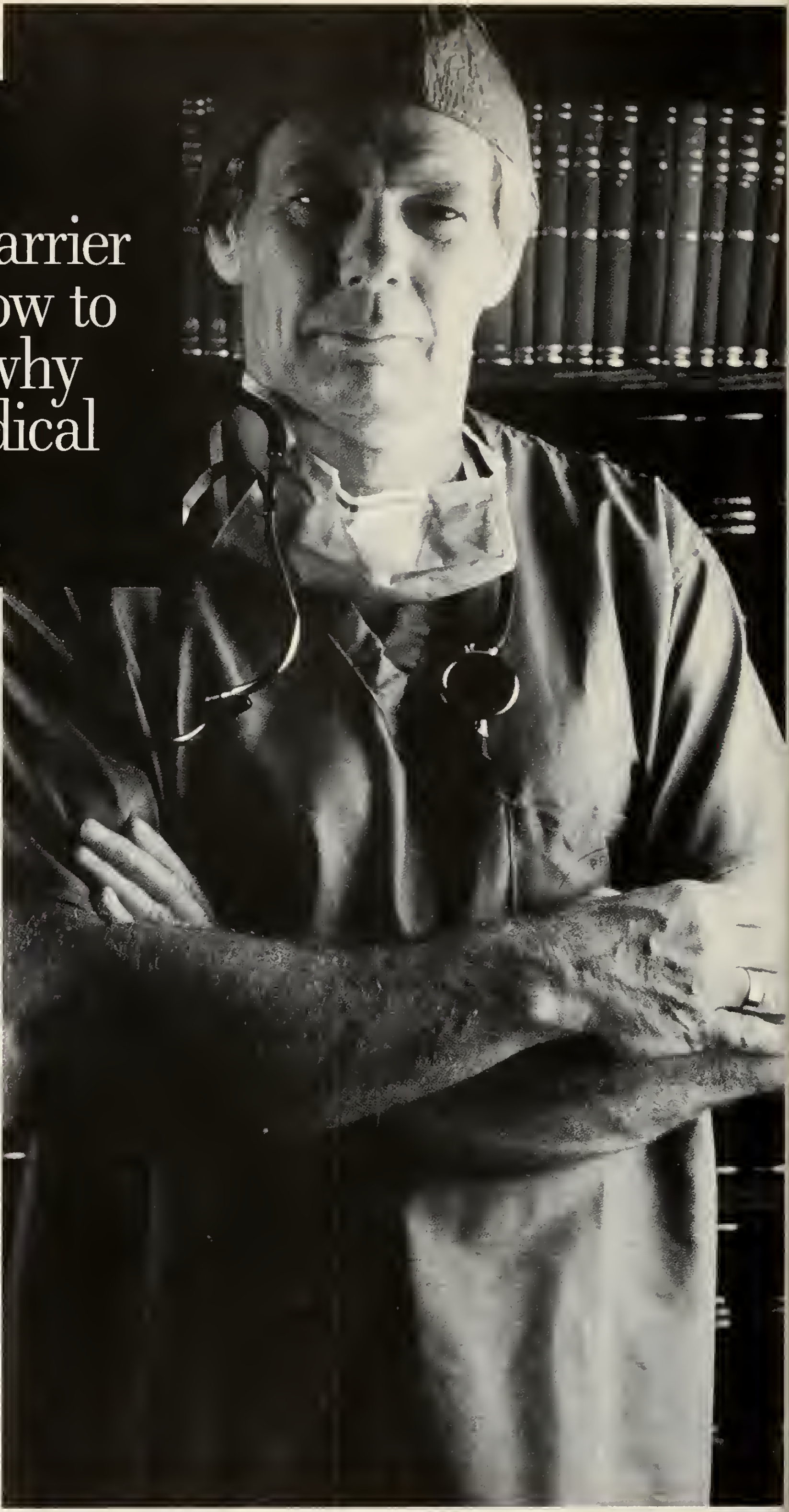
Insured by:
The Mutual Life Insurance Company
of New York

Season's Greetings

from these
Sponsors
of the
Missouri State Medical Foundation
and the
American Medical Association
Education & Research Foundation



Dr. & Mrs. Charles Barbee
Dr. & Mrs. William Stoneman
Dr. & Mrs. Tom Anderson
Dr. & Mrs. Harold Kanagawa
Dr. & Mrs. William N. Walker
Dr. & Mrs. T.J. Cooper
Dr. & Mrs. Richard P. Bowles
Dr. & Mrs. Lester Bryant
Dr. & Mrs. Richard A. Sutter
Dr. & Mrs. E.F. Butler
Dr. & Mrs. William R. McPhee
Dr. & Mrs. Jean A. Chapman
Dr. & Mrs. L.A. Hollinger
Dr. & Mrs. Robert Wankum
Dr. & Mrs. Donald C. Sanders
Dr. & Mrs. James Ritterbusch Jr.
Dr. & Mrs. William C. Allen
Dr. & Mrs. John D. Hunkeler
Dr. & Mrs. Wallace R. Stacey
Mrs. Hobart K.B. Allebach
Dr. & Mrs. W.C. Dandridge Jr.
Dr. & Mrs. Kenneth Bruns
Dr. Dorothy D. Reister
Dr. & Mrs. David E. Perkins
Dr. & Mrs. Stanley Peterson
Dr. & Mrs. William H. Huffaker
Dr. & Mrs. John E. Krettek Jr.
Dr. & Mrs. Prakash B. Patel
Dr. & Mrs. George Bohigian
Dr. & Mrs. Keith Ashcraft
Dr. & Mrs. Donald Fakhoury
Dr. & Mrs. Marvin Singleton
Dr. & Mrs. Gary Dyer
Dr. & Mrs. Thomas Moore
Dr. & Mrs. Robert Olson
Dr. & Mrs. John Mitchell
Dr. & Mrs. Stephen Vilmer
Dr. & Mrs. Jerry L. Meyer
Dr. & Mrs. Tom Sparkman
Dr. & Mrs. F.M. Corry
Dr. & Mrs. Michael Gentry
Dr. & Mrs. Charles H'Doubler
Dr. & Mrs. Carl G. Gold
Dr. & Mrs. A.J. Campbell
Dr. & Mrs. William T. Boulware
Dr. & Mrs. Richard Heimburger



"I want a malpractice carrier that knows how to fight. That's why I'm with Medical Protective."

At Medical Protective, fighting for our doctors is our number one priority. We know we're not just insuring your finances. We're protecting your professional reputation, an asset no amount of insurance can replace.

And when we go to battle, our winning record is unsurpassed. The reasons are simple.

First, no one knows more about defending doctors than we do. We invented professional liability insurance 90 years ago and have been defending doctors ever since.

Second, since our inception we have employed only the most experienced and skilled malpractice lawyers in your area. We will never waver from this commitment.

Third, commitment of this kind requires financial strength and stability. With nearly a billion dollars in assets and a continuous A.M. Best A+ (Superior) rating, we don't have to make individual case decisions based on the bottom line. We have the financial clout to do whatever it takes to serve our doctors.

If you would like this kind of aggressive defense in your corner, don't wait. Call The Medical Protective Company General Agent in your area today.

THE
MEDICAL PROTECTIVE COMPANY

America's premier professional liability insurer.

Ralph E. Borgmann, Philip E.Moppert, Suite 120, 13100 Manchester Road, St. Louis, MO 63131, (314) 965-7400
Thomas E. Meierant, Gregory Sherar, Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222
1-800-321-6726

PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102
Or call her direct:
816/587-1125

Although your name will not be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.

Dear Dr. Woerth:

I have noticed that some of the codes listed in CPT-4 are followed by an asterisk. Can you explain what this means?

P.B.

Dear P.B.:

The asterisk used in CPT-4 is called a star and identifies relatively small surgical services that have variable preoperative and postoperative components. Thus, the usual surgical package concept, which includes the surgical procedure, local infiltration, metacarpal/digital block or topical anesthesia and the normal, uncomplicated postoperative follow-up, does not apply to starred procedures when billing. This means that if a starred procedure is rendered, and there are identifiable preoperative or postoperative procedures also rendered, the preoperative and postoperative procedures should be billed separately. The full explanation of starred procedures is listed on pages 73-74 of the 1989 CPT-4.

Often the billing of these preoperative and postoperative procedures, done in conjunction with a starred procedure, is overlooked. In many of the medical offices in which I have consulted, I have found this is a source of lost revenue. To ensure that this is not a source of lost revenue in your office, make sure that these starred procedures are noted on superbills, encounter forms and computer codes.

Dear Dr. Woerth:

Where can I obtain some general information about Medicare, including those services that are covered and those services that are not covered?

A.M.

Dear A.M.:

Medicare has an excellent handbook for patients that explains in fairly easy-to-read language the general scope of Medicare Part B. It includes a list of Medicare covered and non-covered services. It even explains the difference between participating and non-participating physicians. It is available through Medicare and is titled *The Medicare Handbook 1989.*

■

MISSOURI
DAW
MD
DISPENSE AS WRITTEN

The practice is yours.
The patients are yours.
The prescriptions are yours.

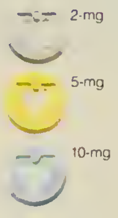
Make the prescribing decision yours, too.

Sign on the right on
the "Dispense as written" line.

Specify VALIUM®
brand of
diazepam/Roche Ⓘⓥ

The cut out "V" design is a registered trademark of Roche Products Inc

The one you know best.


2-mg
5-mg
10-mg
scored tablets

Copyright © 1988 by Roche Products Inc
All rights reserved

ROCHE Roche Products
Roche Products Inc
Manati, Puerto Rico 00701

SPECIAL SERIES

Laboratory Diagnosis of HIV Infection

Gregory A. Storch, M.D., and Max Q. Arens, Ph.D.
St. Louis, Missouri

The implications of a diagnosis of HIV infection are far-reaching. Thus, accurate interpretation of laboratory tests becomes critical. The authors provide descriptions of the tests now available and discuss the utility of each.

A diagnosis of human immmunodeficiency virus (HIV) infection has profound consequences for the individual involved as well as for intimate and family contacts. Thus, it is critically important for physicians to be knowledgeable about the basis for making this diagnosis. We review the laboratory tests used to establish the diagnosis of HIV infection. As with all laboratory tests, proper interpretation requires clinical judgment.

HIV Antibody Assays

The diagnosis of HIV infection is usually established using an HIV antibody assay. These tests measure antibodies produced in response to infection with HIV. Unlike most antibody tests, in which the presence of specific antibodies signifies past or current infection with the agent in question, a positive HIV antibody test signifies the presence of current HIV infection. In most cases, it is believed that HIV antibodies are detectable within 4-12 weeks after infection. However, recent studies using viral cultures and the polymerase chain reaction (PCR, see below) have shown that some individuals may be infected for as long as several years before HIV antibodies become detectable. Studies are ongoing to determine how common this phenomenon is. Preliminary results suggest that it is unusual. Because current understanding is that HIV infection is virtually always chronic, an individual who truly has HIV antibodies must be assumed to have active infection that will most likely progress and be capable of being transmitted to others.

HIV Antibody ELISA

The most common assay used for measuring HIV antibodies is enzyme linked immunosorbent assay (ELISA). The advantages of this assay are that it can be both highly sensitive and specific, and also that it lends itself to testing large numbers of specimens. It is considered to be a screening procedure because false positive tests do occur. Although they generally represent less than 1% of specimens, these false positives may outnumber true positives if true positives are rare in the population being tested. Because of the possibility of a false positive, a positive ELISA should be corroborated by another test.

Western blot

In most laboratories, when a specimen tests positive for HIV antibodies, the first step is to repeat the assay. Positive test results which are not reproducible within the laboratory are usually not reported as positive. If the specimen is reproducibly positive, it should be retested using a second test method that is more specific than ELISA. The method used most widely for this purpose is the western blot. In this test, antibodies present in the serum bind to the specific viral protein against which they are directed. Bound antibodies are detected using a second antibody which recognizes human immunoglobulins. Thus, the western blot reveals not only whether antibodies to HIV are present, but also which of the viral proteins they recognize. The ability to detect several antibodies in the locations expected for HIV proteins makes false positive tests very unlikely. It has been estimated that if the test sequence described above is followed, the specificity of the ELISA confirmed by western blot is better than one in 100,000. Although the western blot is both more sensitive and specific than the ELISA, it is too technically demanding and expensive to use as a screening test.

Prognostic significance of antibodies to specific viral proteins

There may be clinical significance to the presence or absence of antibodies to specific HIV proteins. For example, many individuals with advanced AIDS lack antibodies to the p24 (gag) protein. A corollary is that the loss of antibodies to p24 is a bad prognostic sign. Thus, in addition to establishing the diagnosis of HIV infection, the western blot can provide prognostic information.

Interpretive criteria for western blots

A confusing aspect of the western blot is the question of how many antibody bands must be present for a western blot to be considered positive. Several different sets of interpretive criteria have been proposed. The criteria vary in their stringency, affecting the sensitivity and specificity of the western blot. It is important for physicians to be aware that in addition to using different interpretive criteria, laboratories use widely varying procedures for performing the western blot. Not surprisingly, substantial differences in inter-laboratory performance have been documented.

The "indeterminate" western blot

While most positive ELISA tests are clearly determined to be either true or false positives by the western blot, the occurrence of an indeterminate western blot is not rare. The interpretation of indeterminate western blots is problematic. Possible explanations include very early or very advanced HIV infection, infection with a different retrovirus such as HIV-2, or nonspecific cross-reactivity from non-HIV related antibodies or other serum proteins. When confronted by an indeterminate western blot, the best approach is to repeat the test after 2-3 months. By then individuals whose indeterminate western blot was the result of very early infection usually have a clearly positive test. Some individuals whose blot was indeterminate because of nonspecific reactivity will no longer have any bands, and can be told they do not have HIV antibodies. Some individuals continue to have an indeterminate pattern even upon testing of a second specimen. The counselling of these individuals should take into account the presence of HIV risk factors. If risk factors are present, the possibility of HIV infection is real, and continued follow-up is required. If no risk factors are present, it is more likely that the indeterminate western blot is the result of nonspecific reactivity. In some situations, HIV testing of contacts may help resolve the issue. Other tests discussed below may also be helpful.

Indications for HIV antibody testing

The major use of HIV antibody assays is to define the presence of HIV infection. Until recently, there was considerable debate about how widely HIV antibody testing should be employed. Arguments against testing included the possibility of false positive tests, the fear that confidentiality might not be maintained, and concern that a positive test might lead to stigmatization and discrimination. Furthermore, there were no immediate treatment implications of a positive test. However, recent developments in HIV therapy have stimulated a reassessment of HIV antibody testing. The recent finding that azidothymidine (AZT) slows the progression of disease in individuals with early HIV infection suggests that widespread HIV antibody testing is an important public health measure to identify HIV-infected individuals. Thus, at the present time, a rational approach is to perform HIV antibody testing on all individuals with any possibility of HIV infection. A confirmed positive test should be followed by an analysis of lymphocyte subpopulations to determine the number of circulating CD4+ cells. In addition, any individual with a positive test should be counselled about not exposing others. Testing should also be extended to sexual contacts or partners in illicit drug use.

HIV p24 antigen assay

An assay that measures the presence of p24 antigen in serum or plasma has recently been licensed by the FDA. The p24 antigen is the viral core protein, produced from the gag gene. It is detectable in serum for several weeks after infection (usually before HIV antibodies can be detected), but then disappears for a variable period of time, reappearing as an indicator of active viral replication when HIV disease has become more advanced. However, not all patients with AIDS have detectable p24 antigen. Because the p24 antigen assay is quantitative, it is widely used in clinical trials as a measure of treatment efficacy. Although the p24 antigen assay has prognostic value, a recent study suggests that a low CD4 count is a better predictor of opportunistic infection.

HIV culture

HIV can be grown in the laboratory by cocultivating patient lymphocytes along with normal human lymphocytes which have been stimulated by phytohemagglutinin. Using this technique, virus can be recovered from most individuals with a positive HIV antibody test, although several specimens may have to be cultured. Because the culture procedure is both technically demanding and expensive, and is less sensitive for detecting infection than the HIV antibody assay, it is not widely used for routine diagnostic purposes. Its main clinical use apart from clinical trials is in determining which infants born to HIV-infected mothers are themselves infected. In this situation, the HIV antibody assay is not useful because of the passive transfer of maternal antibodies. A positive culture from the infant defines the presence of infection. Because of the difficulty, expense, and biohazard precautions required for performing HIV cultures, this procedure is currently available only in a limited number of research-oriented laboratories.

Polymerase chain reaction (PCR)

The polymerase chain reaction is a recently developed technique that employs methods of molecular biology to amplify a specific DNA sequence. One of its first applications has been for the detection of HIV. While PCR is capable of exquisite sensitivity and specificity, it has significant pitfalls. Many laboratories have been plagued by problems resulting from contamination of reagents or instruments with the amplified DNA. Because the technique is so sensitive, contamination with even minuscule amounts of target DNA can result in amplification of the contaminant. A different concern is that a negative result is meaningful only if careful controls are used to demonstrate that the amplification reaction proceeded successfully.

Early results have indicated that PCR is probably the most sensitive method available for detecting the presence of HIV. Currently PCR is strictly a research tool, but several areas for application are attractive. In addition to very early detection of HIV following infection, it may be possible to use PCR to help resolve whether infection is truly present in individuals with indeterminate western blots. PCR may also be very useful in supplementing culture in the detection of HIV in infants born to HIV-seropositive mothers. PCR will probably also be useful in detecting infection with retroviruses other than HIV-1, or in detecting simultaneous infection with more than one retrovirus. Although PCR is an extremely exciting technique that will surely find wide application in the future, its current clinical use should be restricted to research laboratories that are prepared to carry out the most painstaking quality control measure.

References

1. Centers for Disease Control: Public Health Service guidelines for counseling and antibody testing to prevent HIV infection and AIDS. *MMWR* 1987;36:509-515.
2. Centers for Disease Control: Update: Serologic testing for antibody to human immunodeficiency virus. *MMWR* 1988;36:833-845.
3. Meyer KB, Pauker CG: Screening for HIV: Can we afford the false positive rate? *NEJM* 1987;317:238-241.
4. Burke DS, Brundage JF, Redfield RR, et al: Measurement of the false positive rate in a screening program for human immunodeficiency virus infection. *NEJM* 1988;319:961-964.
5. Rhame FS, Maki DG: The case for wider use of testing for HIV infection. *NEJM* 1989;320:1248-1254.
6. Lo B, Steinbrook RL, Cooke M, et al: Voluntary screening for human immunodeficiency virus (HIV) infection: Weighing the benefits and harms. *Ann Intern Med* 1989;110:727-733.
7. Ou C-Y, Kwok S, Mitchell SW, et al: DNA amplification for direct detection of HIV-1 in DNA of peripheral blood mononuclear cells. *Science* 1988;239:295-297.
8. Farzadegan H, Polis MA, Wolinsky SM, et al: Loss of human immunodeficiency virus type 1 (HIV-1) antibodies with evidence of viral infection in asymptomatic homosexual men. *Ann Intern Med* 1988;108:785-790.
9. Imagawa DT, Lee MH, Wolinsky SM, et al: Human immunodeficiency virus type 1 infection in homosexual men who remain seronegative for prolonged periods. *NEJM* 1989;320:1458-1462.

The Authors

GREGORY A. STORCH, M.D.
MAX Q. ARENS, PH.D.

Drs. Storch and Arens are co-directors of the ACTU Retrovirology Laboratory at St. Louis Children's Hospital. Dr. Storch is Associate Professor of Pediatrics and Director of the Clinical Microbiology Laboratory at St. Louis Children's Hospital and Dr. Arens is Research Assistant Professor of Pediatrics and Associate Director of the Virology Laboratory at St. Louis Children's Hospital. Both are affiliated with the AIDS Clinical Trials Unit, Washington University School of Medicine.

Supported by PHS grant AI-25903.

Reprints not available

Initial Results of a Program in Liver Transplantation

John J. Brems, M.D., Lou Ann Biermann, RN, BSN, Shobha Joshi, M.D., Robert E. Kane, M.D., Michael E. Hayek, M.D., Paul J. Garvin, M.D., and Donald L. Kaminski, M.D.
St. Louis, Missouri

St. Louis University established a liver transplant program in early 1988. The authors report on the program's first 10 months in operation, emphasizing the careful planning and cooperation the medical center must undertake to ensure the program's success.

Liver transplantation has now become accepted as definitive therapy for various forms of end-stage liver disease. It is a relatively recent development: the first human orthotopic liver transplant was performed in 1963,[1] and the first successful procedure was in 1967 by Starzl et al.[2] Throughout the late '60s and '70s, approximately 15 to 20 patients per year received liver transplants. Most of these were performed by Starzl and colleagues in Colorado, and by Calne and Williams in England.

With the introduction of cyclosporine in 1980 and the recommendations of the National Institutes of Health (NIH) Consensus Conference in June 1983, liver transplantation has become widely established as a therapeutic procedure for patients with end-stage liver disease.[3] Regional transplant centers are needed to provide the complex level of care required to treat the estimated 30 persons per million population who are potential candidates for liver transplantation.[4] This report describes the organization, initiation, and early results of the program in liver transplantation at St. Louis University Medical Center.

Methods

In early 1988, St. Louis University initiated a clinical program in liver transplantation to complement existing programs in renal, pancreatic, bone, bone marrow, lung and cardiac transplantation, which were already active and successful. An organ procurement agency and sophisticated tissue typing laboratory were active. Expert ancillary and critical care support service were available, as were efficient blood bank and operating room facilities.

A surgeon with extensive training in liver transplantation at the University of California at Los Angeles was recruited[5,6] and a large multidisciplinary team was assembled (Table 1). A widespread educational campaign was initiated among the nursing staff of the operating room, intensive care facilities, and ward regarding the care and management of the liver transplant patient. After three months of intensive education, meetings, and problem-solving, an enthusiastic team was ready to begin clinical liver transplantation.

Patient Evaluation and Selection

Evaluation and selection of patients is a crucial function of the liver transplant team. The goal of the liver transplant evaluation is to ensure that the patient has end-stage liver disease for which liver transplantation is indicated (Table 2). It is preferred that the patient and family come to St. Louis University for a one-day inpatient evaluation. During this stay, the patient

Table 1
Composition of Liver Transplant Team

3	Surgeons
3	Anesthesiologists
5	Operating Room Nurses
2	Hepatologists: Pediatric and Adult
2	Nephrologists
2	Infectious Disease Specialists
1	Hyperalimentation and Nutrition Specialist
1	Psychiatrist
1	Social Worker
1	Clinical Nurse Coordinator
1	Administrative Coordinator
2	Perfusionists
1	Surgical Fellow
2	Pastoral Care
1	Pulmonologist

Table 2
Medical Indications for Orthotopic Liver Transplantation

1. Congenital or acquired end-stage cirrhosis
    - Primary biliary
    - Secondary biliary
    - Chronic active hepatitis
    - Alcoholic
    - Cryptogenic
    - Autoimmune
    - Sclerosing cholangitis
    - Drug induced
    - Biliary atresia
2. Metabolic disorders
    - Tyrosinemia
    - Hemochromatosis
    - Galactosemia
    - Type IV hyperlipidemia
    - Glycogen storage disease
    - Alpha-1-antitrypsin deficiency
    - Wilson's disease
    - Hemophilia A
    - Protoporphyria
3. Budd-Chiari syndrome
4. Fulminant hepatic failure
5. Primary hepatic malignancies

is seen by appropriate members of the Patient Selection Committee, including surgeons, hepatologists, nephrologists, psychiatrists, infectious disease specialists, and social workers. An extensive laboratory workup and a noninvasive evaluation of the vascular components of the liver are performed. Computed axial tomographic scans of the chest, abdomen and pelvis are performed on all patients with hepatic tumors to detect any evidence of extrahepatic spread. Patients who have not received prior chemotherapy are eligible for enrollment in a protocol evaluating intensive chemotherapy for hepatocellular carcinoma after liver transplantation.

The initial evaluation period is an important time to ensure that the patient and family understand the complexity of the operation and the need for lifelong medication and follow-up care. At a weekly Patient Selection Committee meeting, the group evaluates each patient's indications for transplantation and verifies the absence of contraindications (Table 3).

Operation and Postoperative Management

Once selected for transplantation, the patient is placed on a waiting list and the United Network of Organ Sharing (UNOS) is notified. When a suitable donor is identified, a chain of notification commences in preparation for the transplant.

The liver transplant operation is divided into three stages: donor hepatectomy, recipient hepatectomy, and transplantation of the liver. The donor operation usually takes place away from St. Louis University Medical Center; two surgeons and a nurse travel to the donor's hospital to procure the liver. The procurement operation generally also involves the heart and kidneys. The recent development of the University of Wisconsin Solution, a revolutionary preservation solution, has allowed the cold preservation of livers for up to 24 hours.[7] The use of this solution has resulted in an immediate and dramatic improvement in the results of liver transplantation.

The recipient hepatectomy is the most difficult part of the procedure because portal hypertension and coagulopathy characterize end-stage liver disease in most patients. All adult patients are placed on venovenous bypass to reduce the hemodynamic instability of the anhepatic phase of the operation.

During implantation of the graft, four vascular anastomoses and one biliary anastomosis must be performed. The hepatic artery anastomosis is the most critical, since thrombosis of the artery usually mandates retransplantation.

In the postoperative period, patients are maintained on triple drug therapy with azathioprine, cyclosporine, and corticosteroids. Liver biopsies are performed frequently to detect acute rejection episodes.

Table 3
Contraindications to Liver Transplantation

I. Absolute
- A. Advanced cardiopulmonary disease
- B. Active sepsis outside the hepatobiliary tree
- C. Malignancy outside the hepatobiliary system
- D. Active alcohol or drug abuse
- E. AIDS

II. Relative
- A. Age greater than 65 years
- B. Hypoxia with intrapulmonary shunts
- C. HIV positivity
- D. HBsAg and HBeAg positivity

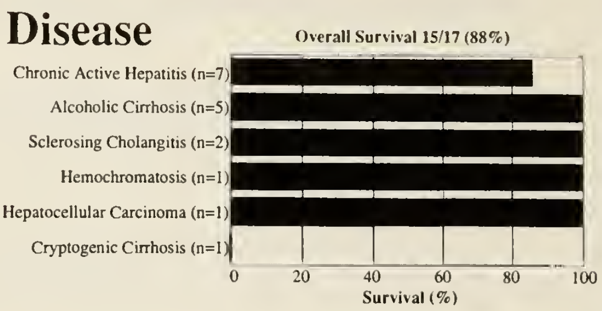


Fig 1. Outcome of liver transplantation and distribution of the patient population. (July 25, 1988 - June 1, 1989)

Results

After three months of intensive preparation, the first patient underwent liver transplantation at St. Louis University on July 25, 1988. This debilitated woman had chronic active hepatitis with intractable ascites, a severe coagulopathy, and mild hepatic encephalopathy. She had been hospitalized for one month prior to her transplant with spontaneous bacterial peritonitis and other related problems. After treatment of the peritonitis, she underwent urgent liver transplantation. The transplanted liver functioned suboptimally, and she received a second transplant four days later. After her second transplant, she made a rapid recovery, but one month later developed a life-threatening cytomegalovirus hepatitis, requiring treatment with gancyclovir. She recovered fully from this, but developed chronic rejection, with loss of bile ducts. It was decided to perform yet another transplant, and two months after the initial operation, she received her third donor liver. This transplant was successful, and she was discharged from the hospital three weeks later. She has continued to do well without any evidence of hepatic dysfunction.

We have performed 22 liver transplants in 17 patients during the first 10 months of the program (Fig 1). All have been adults, with a mean age of 42 years, ranging from 22 to 56 years. The one-year actuarial patient survival is 88%, with a one-year actuarial graft survival of 68%. Currently, three pediatric patients are awaiting liver transplantation. They have been waiting from two weeks to six months. Pediatric donors continue to be a precious and scarce resource.

Two deaths occurred in this series. One patient died on the first postoperative day from acute cardiac failure. This patient had primary pulmonary hypertension, cryptogenic cirrhosis, and portal vein thrombosis. After portal blood flow was restored during the transplant, he developed refractory right-sided heart failure and died 24 hours later.

The second death occurred in a woman with autoimmune hepatitis who had had an uneventful transplant of a blood-type specific donor liver. However, the retrospective cross-match was highly positive for both T and B cells. Initially the transplanted liver functioned well, as evidenced by bile production, correction of her metabolic acidosis, and normalization of coagulation factors. During the ensuing 72 hours, however, she developed worsening hepatic function and lapsed into hepatic coma. Noninvasive vascular studies indicated patency of all vascular anastomoses. A percutaneous liver biopsy revealed severe rejection with hepatic necrosis. Because an intact donor liver was unavailable, she underwent retransplantation with the right lobe of a donor liver. The left lobe of the liver was transplanted in a small child at another institution. After the partial liver was revascularized in our patient, she developed refractory cardiac arrhythmias and died. Her death is believed to have been due to metabolic abnormalities and hypothermia.

Fifteen of the 17 patients are alive and doing well with a mean follow-up of 6 ± 4 months. Six patients received transplants for chronic active hepatitis. Encouraged by the recent Pittsburgh experience,[8] five males have received transplants for alcoholic cirrhosis. All five had abstained from alcohol use for six months to five years prior to transplantation, and all underwent psychosocial evaluations and were felt to have a low probability of recidivism. Two patients with sclerosing cholangitis received transplants; one was discovered to have an occult cholangiocarcinoma after examination of the surgical specimen. One patient with severe hepatic encephalopathy and hemochromatosis underwent transplantation on an emergent basis. Her neurologic function improved promptly and she has done well since. The sole patient who received a transplant for hepatocellular carcinoma has developed bone metastasis to the pelvis and ribs. She has received radiation therapy and chemotherapy with good palliation.

Current data indicate that patients who undergo liver transplantation for hepatocellular carcinoma can be cured, but they also have a high relapse rate, with only 20% to 30% of patients alive and free of disease after two years. In an effort to improve the likelihood of cure, we are participating in a multi-institutional nonrandomized trial, investigating an intensive chemotherapy regimen. Patients who have histologic proof of diagnosis, disease confined to the liver, and who have not received previous chemotherapy, are eligible for this protocol. Indeed, how to prevent relapse of hepatocellular carcinoma following liver transplantation is one of the most important outstanding questions in the field of liver transplantation.

The average operating time for these 22 procedures was 8.2 hours. Average blood loss was 15.1 units of packed RBCs, 17.1 units of fresh frozen plasma, and 9.2 units of platelets. A blood scavenging system was used in all transplants performed on patients without hepatic malignancy.

Complications after liver transplantation are common, usually involving rejection episodes or infection. Fifty-three percent of our patients experienced at least one episode of acute rejection, which was easily reversed in most cases by increased dosage of corticosteroids. Only one patient, our first transplant recipient, developed chronic rejection with vanishing bile ducts and she underwent retransplantation.

Infectious complications included fungal, viral, and bacterial. Five patients developed infectious complications, but none died. Two patients developed systemic candidiasis and were successfully treated with amphotericin B, and two patients had severe, life-threatening CMV infections that responded dramatically to gancyclovir therapy. One patient developed toxic shock syndrome and was treated successfully with vancomycin.

Renal failure requiring dialysis occurred in three patients. Other complications, each of which occurred once in this series, included postoperative bleeding requiring reoperation, neurologic dysfunction, cardiac failure, development of a pancreatic pseudocyst, and hepatic artery thrombosis.

Four of the 17 patients (23%) underwent retransplantation, with our first patient undergoing two retransplantations. Indications for retransplantation included primary nonfunction in two patients, and hepatic artery thrombosis and chronic rejection, each occurring in one patient. Primary nonfunction occurred after our first transplant, as described earlier, and after our fifth transplant. In this case, the donor liver had been procured from a person who died from an amitriptyline overdose. Unfortunately, the donor liver contained a large quantity of the drug, resulting in toxicity and coma in our recipient. Our recipient was retransplanted and immediately awakened from her coma. This case has been described in detail elsewhere.[9]

Despite the complications, the rewards for orthotopic liver transplantation have been great. Once patients have been discharged from the hospital, they have enjoyed an excellent quality of life. Five have returned to work, two have returned to school, and five have returned to being homemakers and raising their children. Three are still recovering.

Liver transplantation continues to be the most expensive of solid organ transplants. Critics are concerned that the procedure may not be cost-effective, due to limited health care dollars. The financial burden for liver transplantation usually falls to commercial insurance carriers or state-funded medical programs. In Missouri, Medicaid helps pay for liver transplantation for qualified patients. At St. Louis University, hospital charges ranged from $55,000 to $321,000, with a mean of $104,000. This compares favorably to costs reported by other major transplant centers[5,10] and to the costs of caring for patients with end-stage liver disease. In 1985, hospital charges for patients with end-stage liver disease, during the last 12 months of life, averaged $45,643. In individual cases, the total was as high as $100,000.[11] Putting liver transplantation costs in perspective, we would note that 80% to 90% of patients who receive transplants are successfully rehabilitated and return to a productive lifestyle.

The development of a successful liver transplant program requires an extraordinary effort and commitment from multiple disciplines in the medical center. However, with careful planning, a successful program can be realized from the onset, complementing existing programs and acting as an academic stimulus within the institution.

References

1. Starzl TE, Marchiaro TL, Von Kaulla K, et al: Homotransplantation of the liver in humans. *Surg Gynecol Obstet* 1963;117:659-676.

2. Starzl TE, Groth CT, Brattschneider L, et al: Orthotopic homotransplantation. *Ann Surg* 1968;169:392-415.
3. NIH Consensus Development Conference Statement: Liver transplantation. June 20-23, 1983. *Hepatology* 1984;4:1075-1095.
4. NIH Consensus Development Conference Statement: Liver transplantation. *Hepatology* 1984;4(Suppl):107.
5. Busuttil RW, Colonna JO, Hiatt JR, Brems JJ, et al: The first 100 liver transplants at UCLA. *Ann Surg* 1987;206(4):387-402.
6. Brems JJ, Hiatt JR, Klein AS, Busuttil RW, et al: Hepatic artery reconstruction during liver transplantation. *Transplantation* 1989;47(2):403-406.
7. Belzer FO, Southard JH: Principles of solid-organ preservation by cold storage. *Transplantation* 1988;45(4):673-676.
8. Starzl TE, Van Thiel DH, Tzakis AG, et al: Orthotopic liver transplantation for alcoholic cirrhosis. *JAMA* 1988;260(17):2542-2544.
9. Brems JJ, Hayek ME, Flynn M, et al: Orthotopic liver transplantation resulting in amitriptyline toxicity in the recipient. *Transplantation* (in press).
10. Van Thiel DH, et al: Liver transplantation in adults: An analysis of costs and benefits at the University of Pittsburgh. *Gastroenterol* 1986;90:211-216.
11. Williams J, Vera S, Evans L: Socioeconomic aspects of hepatic transplantation. *Am J Gastro* 1987;82:1115-1119.

The Authors

JOHN J. BREMS, M.D.
LOU ANN BIERMANN, R.N., B.S.N.
SHOBHA JOSHI, M.D.
ROBERT E. KANE, M.D.
MICHAEL E. HAYEK, M.D.
PAUL J. GARVIN, M.D.
DONALD L. KAMINSKI, M.D.

The authors are from the Departments of Surgery, Medicine, and Pediatrics at St. Louis University School of Medicine.

Reprints

John J. Brems, M.D.
Department of Surgery
3635 Vista Avenue at Grand Boulevard
P.O. Box 15250
St. Louis, Missouri 63110-0250

Breast Cancer Incidence Among Women in Missouri

Implications for Cancer Control

Jian C. Chang, Ph.D., Sherri G. Simms, M.S.N., R.N., C.,
James R. Davis, M.S., and Ross C. Brownson, Ph.D.
Columbia, Missouri

During the past decade, the incidence of breast cancer in Missouri women has apparently increased. As this study shows, however, this apparent rise is due to the early detection of localized cancers — those with higher cure rates. The implications of the findings are discussed.

In the United States, cancer of the breast is the most common type of cancer among women, although lung cancer recently surpassed breast cancer as the leading cause of cancer deaths in women.[1,2] An estimated 3,200 new breast cancers will occur in Missouri in 1989, and a woman has a one in 10 chance of developing breast cancer in her lifetime.[2]

The Surveillance, Epidemiology and End Results (SEER) program,[3,4] sponsored by the National Cancer Institute (NCI), recently reported a 21% increase in breast cancer incidence from 1980 to 1985, with most of the increase occurring in the incidence of cancer staged as localized and in-situ. This increase occurred in the age-adjusted incidence rates of breast cancer among white women both under and over 50 years of age. Similar increases were shown among black women. It is yet unclear whether the increase in breast cancer rates is a true increase in incidence, or if it is the result of increased detection.

An important factor in prognosis is the extent of disease at the time of diagnosis.[1] Several studies[5-9] have examined whether screening for breast cancer using mammography alone or in combination with physical examination can reduce cancer mortality. These studies were based on the hypothesis that by increasing the number of cancers detected in the localized and in-situ stages, when the potential for cure is greatest, breast cancer mortality could be reduced. Of particular importance are the findings of the Swedish National Board of Health and Welfare study,[5,8] the only randomized, controlled trial using mammography as the sole screening modality. The project began in 1977, and results by the end of 1984 showed a 31% reduction in mortality from breast cancer, a 25% reduction in the absolute rate of regional or more advanced cancers, and an increase in the absolute rate of localized cancers in the study group.[5]

Another randomized trial, conducted by the Health Insurance Plan of New York,[9,10] screened 31,000 women for breast cancer between 1963 and 1970 using mammography and physical examination. After nine years of follow-up, a 30% reduction in breast cancer mortality was shown among the total study group compared with the control group, and a 40% reduction in mortality was observed among women 50 years and older at time of entry.[9,10] Among cancers detected

Table 1
Female Breast Cancer Annual Age-adjusted Incidence Rates per 100,000*
By Stage, Age Groups and Year of Diagnosis, Missouri 1980-1987

Stage Age Group	Year of Diagnosis 1980-1983	 1984-1987	Absolute Percent Increase	Adjusted Percent Increase***
In-situ				
Age <50	0.4	2.2	530**	432
≥50	2.5	12.0	382**	265
All Ages	0.9	4.6	423**	312
Localized				
Age<50	6.2	13.3	115	17
≥50	44.2	122.7	178**	61
All Ages	15.5	40.1	159	48
Regional				
Age <50	5.2	11.2	115	17
≥50	37.5	77.3	106	11
All Ages	13.2	27.4	109	-2
Distant				
Age <50	2.8	2.2	-21	-119
≥50	23.5	23.2	- 1**	-118
All Ages	7.9	7.4	- 7**	-118
All Stages				
Age <50	14.8	29.2	98	
≥50	109.4	237.0	117	
All Ages	38.0	80.2	111	

*Rates are age-adjusted to the 1970 U.S. Standard Population.
**Percent increase is statistically significant at (p<.05).
***Adjusted percent increases by stage is the difference between the absolute percent increase and the overall increase in breast cancer incidence.

in women 50 years or older, 38% were found by mammography alone.[9]

Our study used Missouri Cancer Registry (MCR) data to compare trends in breast cancer incidence during the periods 1980-1983 and 1984-1987. In addition, information on the number of mammographic examinations performed in Missouri hospitals in 1987 was compared with breast cancer incidence.

Methods

The MCR has been collecting data on cancer cases from Missouri hospitals since 1972. The Registry experienced a slow and steady growth between 1972 and 1983, when cancer reporting by Missouri hospitals was voluntary. However, in 1983, the state legislature passed a law that made cancer case reporting mandatory and designated the MCR of the Missouri Department of Health as the centralized statewide registry. The cancer reportability law significantly increased the level of cancer incidence reporting by Missouri hospitals.

Our study examined approximately the same time period as the recent NCI study.[3] Breast cancer incidence rates were compared between the time periods 1980-1983 and 1984-1987. Because the reportability

Table 2
Female Breast Cancer Annual Age-adjusted Incidence Rates per 100,000* by Stage, Age Group, Year of Diagnosis and Race, Missouri 1980-1987

	Whites				Blacks			
Stage Age Groups	**Year Diagnosis 1980-1983**	**Year Diagnosis 1984-1987**	**Absolute Percent Increase**	**Adjusted Percent Increase*** **	**Year Diagnosis 1980-1983**	**Year Diagnosis 1984-1987**	**Absolute Percent Increase**	**Adjusted Percent Increase*** **
In-situ								
Age <50	0.3	2.3	579**	486	0.5	1.1	148	17
Age ≥50	2.5	11.5	366**	245	3.4	14.0	311**	244
All Ages	0.9	4.6	424**	311	1.2	4.3	266	183
Localized								
Age <50	6.3	13.2	109	16	5.2	13.7	162	31
Age ≥50	43.8	124.7	185**	64	43.2	88.5	105**	38
All Ages	15.5	40.5	162	49	14.6	32.1	120	37
Regional								
Age <50	5.3	11.0	107	14	4.5	12.5	179	48
Age ≥50	36.3	77.1	113	- 8	50.0	71.5	43	- 24
All Ages	12.9	27.2	111	- 2	15.7	27.0	72	- 11
Distant								
Age <50	2.8	2.3	- 21	- 114	2.9	2.4	- 17	- 148
Age≥50	23.2	22.9	- 2**	- 123	24.0	26.3	10**	- 57
All Ages	7.8	7.3	- 7**	- 120	8.1	8.2	2	- 81
All Stages								
Age <50	15.0	29.0	93		13.2	30.6	131	
Age ≥50	107.5	237.8	121		122.6	204.7	67	
All Ages	37.9	80.1	113		40.1	73.3	83	

* Rates are age-adjusted to the 1970 U.S. Standard Population

** Percent increase is statistically significant at ($p < .05$)

*** Adjusted percent increases by stage is the difference between the absolute percent increase and the overall increase in breast cancer incidence

law created an artificial increase in breast cancer incidence, the percent increase has been termed an "apparent" increase. An estimate of the actual increase in each stage was calculated by subtracting the increase in overall breast cancer incidence from the observed increase in each stage. The data for the two time periods were further examined according to race and estimated menopausal status. The direct method[11] was used to adjust the cancer rates for age. The 1970 United States population was used as the standard, as in the SEER report.[12]

We also compared changes in breast cancer incidence to the number of mammographic examinations performed by Missouri hospitals. Hospital mammography data for 1987 were obtained from the Annual Licensing Survey of Missouri Hospitals.[13] The survey was a cooperative project of the Missouri Department of Health, the Missouri Hospital Association, and the American Hospital Association. The survey was a self-report of hospital utilization, revenue, expenses, and

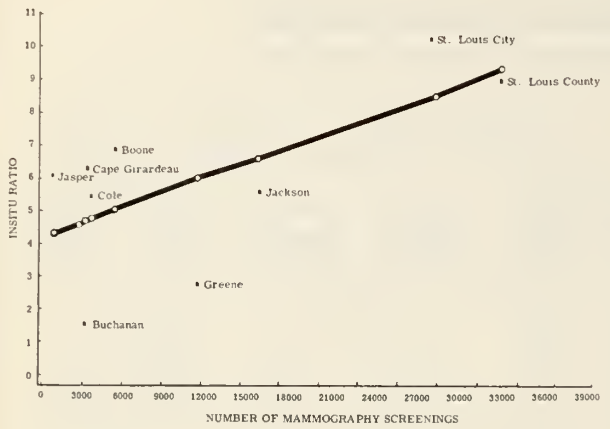


Fig 1. Linear regression of the ratio of in-situ breast cancer cases verses number of mammographic screenings for 1987 (Y= .00014X + 4.27): In-situ ratio was computed by dividing the number of in-situ cases by the total number of cases reported in the county; r = Observed in-situ ratio and number of mammographic screenings by county; * = Expected value based on linear regression.

capital expenditures for a 12-month period. The survey contained several service utilization questions on mammography. The questions ascertained the number of inpatient and outpatient mammographies completed in the previous 12 months.

Results

The study included a total of 14,396 breast cancer cases diagnosed between 1980 and 1987. Of these cases, 4,554 were diagnosed from 1980 to 1983, and 9,842 were diagnosed from 1984 and 1987. For those cases diagnosed between 1980 and 1983, 2% were in-situ, 41% were localized, 34% were regional, 21% were distant, and 2% were unstaged or unknown. During the 1984 to 1987 period, 5% were in-situ, 51% were localized, 34% were regional, 9% were distant, and 1% were unstaged or unknown.

The annual age-adjusted incidence rates per 100,000 for breast cancer in Missouri were 38.0 for 1980-1983 and 80.2 for 1984-1987. This was an apparent increase of 111% in overall breast cancer incidence between the two time periods. The annual age-adjusted incidence rates for all cancer sites combined for females were 152.1 for 1980-1983 and 282.3 for 1984-1987. This was an apparent increase of 86% in overall female cancer incidence reported to the MCR during the two time periods. Excluding lung cancer, the annual age-adjusted incidence rates were 137.9 for 1980-1983 and 251.9 for 1984-1987, which was an apparent 83% increase. These findings indicate that most of the increase in breast cancer incidence resulted from passage of the reportability law.

Table 1 presents average annual age-adjusted cancer incidence rates by stage of disease and period of diagnosis. There were apparent increases of 423% for in-situ cases, 159% for localized cases, and 109% for regional cases. There was a decrease of 7% for distant cases. After subtracting the 111% increase in overall breast cancer incidence, these data show a 312% increase in in-situ cases and a 48% increase in localized cases over the two time periods.

Table 1 also presents results stratified according to pre- and postmenopausal status. The premenopausal group was defined as those women 0 to 49 years of age and the postmenopausal group was defined as women 50 years of age or older. For women under 50 years, the annual age-adjusted breast cancer incidence rates for all stages combined were 14.8 for 1980-1983 and 29.2 for 1984-1987. This was an apparent increase of 98% over the two time periods. For women 50 and older, the annual age-adjusted incidence rates per 100,000 for all stages combined were 109.4 during 1980-1983 and 237.0 during 1984-1987. This was an apparent increase of 117% over the two time periods. Stage-specific age-adjusted rates for the two age groups show trends similar to the age-adjusted rates for all ages combined. Although most of these increases in breast cancer incidence were in the in-situ and localized cases, one exception is noted in regional cases, where there was an apparent 17% increase above the overall increase for women under 50.

The age-adjusted incidence rates for white and black women in Missouri are presented in Table 2. Since white women comprise 88% of Missouri's female population,[14] the apparent increases in cancer incidence for white women are similar to the overall population increases shown in Table 1. For black women 50 and older, there were similar apparent increases in reported in-situ and localized cases above the overall increase in cases for all women 50 and older. Although not statistically significant, for black women under 50 years, there was an apparent increase of 48% in reported regional cases above the overall increase in cases.

The 1987 Annual Missouri Hospital Licensing Survey found that 73% (112) of the 152 hospitals with medical surgical beds offered mammography screening.[13] The survey also showed that there were a total of 145,291 inpatient and outpatient mammography examinations performed in Missouri hospitals during the 12-month period. Figure 1 compares the ratio of in-situ breast cancer cases (number of in-situ cases divided by the total number of cases) with the number of hospital mammography procedures performed in

1987. For comparison purposes, the mammography data are grouped by county. A linear regression showed that increased early detection activity leads to increased reporting of in-situ breast cancer cases relative to all breast cancer cases.

Discussion

Similar to SEER national data, the MCR data showed an increase in the incidence of localized and in-situ breast cancer cases diagnosed during the 1980s. As a result of the SEER report, a working group was formed by the NCI. The group investigated the changes that may have occurred in breast cancer diagnosis, risk factors, and screening and assessed the effect of these changes on breast cancer incidence in the SEER areas. The NCI group concluded that since SEER coding of breast cancer has not changed since 1980, it is unlikely that changes in cancer diagnosis could account for the increase in breast cancer incidence. Further, the group postulated that if changes in the prevalence of risk factors have occurred, the effect is likely to be small and masked by screening-related increases. Conclusive information on breast cancer screening trends is difficult to obtain. However, the NCI group found that substantial increases in breast cancer screening have occurred and that the incidence data appear to be more consistent with an effect caused by earlier diagnosis due to screening. This conclusion is supported by data that show major increases in early stage disease and patterns of change similar in all age groups.[3]

The number of mammography procedures performed in Missouri hospitals compared with the number of in-situ cases diagnosed and reported to date, strongly support the conclusion that screening activities increase the relative frequency of in-situ cases. The study group in the mammography screening project in Sweden initially demonstrated a larger number of regional and distant cancers than the control group.[15] This may indicate that women who have delayed seeking treatment for a breast problem are finally diagnosed with breast cancer as mammography programs first become widespread and their use increases. This is known as lead time bias[8] and may be one explanation for our finding of an increase in regional cases.

Conclusion

According to the MCR data, the incidence of female breast cancer in Missouri has increased during the 1980s. However, the increase has been in the earliest, most curable stages of the disease. The apparent increases in in-situ and localized cancers suggest that increasing numbers of Missouri women are receiving information about the benefits of early detection procedures for cancer. The apparent increase in in-situ cases also correlates highly with the number of mammography screenings performed by Missouri hospitals. These results are consistent with the results of the mammography trial in Sweden and they support the findings of the NCI working group.

The American Cancer Society recently reviewed the Breast Cancer Detection Demonstration Project.[7] They found strong support for the beneficial effect of mammographic screening for breast cancer in both younger and older women.

This conclusion was based on the success of mammography in detecting breast cancer in younger, as compared with older, women; the very high survival rates in such cancers when detected; and the drop in the detection of minimal cancers in younger women when mammography was restricted.

In light of the high five-year survival rate for breast cancer found in an early localized stage (90%),[1] substantial decreases in breast cancer mortality are possible in Missouri if more women are made aware of and participate in early detection programs.

References

1. Early Detection Branch, Division of Cancer Prevention and Control: *Working Guidelines for Early Cancer Detection. Rationale and Supporting Evidence to Decrease Mortality.* Bethesda, Maryland, National Cancer Institute.
2. American Cancer Society Inc: *Cancer Facts and Figures 1989.* New York, American Cancer Society, Publication No. 5008-LE, 1989.
3. Boyd JD: Breast cancer incidence goes up, most of it in early, local stages. *The Cancer Letter* 1988;14:4-8.
4. National Cancer Institute: *1987 Annual Cancer Statistics Review.* Bethesda, Maryland, National Institutes of Health, NIH Publication No. 88-2789, 1988.
5. Tabar L, Gad A, Holmberg LH, et al: Reduction in mortality from breast cancer after mass screening with mammography. *Lancet* 1985;1:829-832.
6. Shapiro BS, Venet W, Strax P, et al: Ten- to fourteen-year effect of screening on breast cancer mortality. *Journal of the NCI* 1982;69:349-355.
7. Seidman H, Gelb SK, Silverberg E, et al: Survival experience in the breast cancer detection demonstration project. *Ca-A Cancer J Clin* 1987;37:258-290.
8. Tabar L, Dean P: The control of breast cancer through mammography screening: What is the evidence? *Rad Clin N Am* 1987;25:993-1005.
9. Feig SA: Decreased breast cancer mortality through mammographic screening: Results of clinical trials. *Radiology* 1988;167:659-665.
10. Shapiro S: Evidence on screening for breast cancer from a randomized trial. *Cancer* 1977;39:2772-2782.
11. Riggan WB, Bruggen JV, Acquavella JF, et al: *U.S. Cancer Mortality Rates and Trends, 1950-1979.* Washington DC, U.S. Government Printing Office, EPA-600/1-83-015a, 1983.
12. U.S. Department of Health and Human Services: *Surveillance Epidemiology End Results — Incidence and Mortality Data: 1973-77.* Bethesda, Maryland, National Institutes of Health, NIH Publication No. 81-2330, 1981.

13. Missouri Department of Health, Missouri Hospital Association, American Hospital Association: *Annual Licensing Survey of Missouri Hospitals*, 1987.
14. U.S. Department of Commerce — Bureau of the Census: General Population Characteristics — Missouri, *1980 Census of Population*. 1982;1:part 27, PC80-1-B27.
15. Tabar L, Gad A, Holmberg L, Ljungquist U: Significant reduction in advanced breast cancer: Results of the first seven years of mammography screening in Kopparberg, Sweden. *Diag Imag Clin Med* 1985;54:158-164.

The Authors

JIAN C. CHANG, PH.D.
SHERRI G. SIMMS, M.S.N., R.N.
JAMES R. DAVIS, M.S.
ROSS C. BROWNSON, PH.D.

The authors are all with the Division of Chronic Disease Prevention and Health Promotion, Missouri Department of Health, Columbia, Missouri. Dr. Chang is from the Missouri Cancer Registry, and Ms. Simms and Mr. Davis are from the Bureau of Smoking, Tobacco and Cancer.

Reprints

Jian C. Chang, Ph.D.
Missouri Cancer Registry
Division of Chronic Disease Prevention
and Health Promotion
Missouri Department of Health
201 Business Loop 70 West
Columbia, Missouri 65203

Neurological Application of Botulinum Toxin

Parveen Kumar, M.D., and William J. Crowley, Jr., M.D.
Columbia, Missouri

Botulinum toxin, a potent biological toxin with paralytic properties, has found use as a therapeutic agent in various diseases. The authors review the toxin's therapeutic value in three neurological diseases.

Botulinum toxin has long been known to the medical profession as the causative agent of botulism, a serious and potentially life-threatening disease. The therapeutic use of botulinum toxin in primates was first reported by Scott et al in 1973.[1] Its therapeutic role in human diseases has been the subject of various investigations and publications since the early 1980s.[2-27]

There are at least eight known subtypes of botulinum toxin, namely A, B, C_1, C_2, D, E, F, and G.[3] Out of these, only one, botulinum toxin type A, has been investigated as a therapeutic agent. Botulinum toxin type A is a highly potent biological toxin produced by *Clostridium botulinum,* whose predominant action seems to be on the nerve terminals of neuromuscular junctions. It probably acts by blocking the Ca^{++} mediated release of acetylcholine from motor nerve terminals, thereby effectively preventing those muscles from contracting. This property of botulinum toxin is responsible for the paralysis of skeletal and extraocular muscles in botulism. This same property of botulinum toxin has been used to prevent the pathological involuntary contraction of muscles that occurs in some diseases.

In humans, botulinum toxin A (Oculinum®) was first used in the treatment of strabismus.[2] There continues to be great enthusiasm about its use in various ophthalmological conditions. It is also being tried in other conditions, such as apraxia of eyelid opening,[4] adductor spasmodic dysphonia,[5] and senile entropion.[6] In this article we discuss three neurological conditions in which botulinum toxin A seems to be finding its most frequent use and is fast becoming the treatment of choice.

Blepharospasm

This condition is characterized by intermittent and prolonged spasms of the orbicularis oculi, leading to repeated, forceful, involuntary and sometimes painful shutting of the eyes. When it is not associated with any underlying pathology, it is called essential blepharospasm. The etiology of essential blepharospasm is unknown. Once considered a psychiatric disorder, essential blepharospasm is currently considered an organic disorder. When the condition is associated with dystonia of facial muscles, it is sometimes called Meige's syndrome. Numerous remedies have been tried for this condition, with disappointing results. Operations performed for this condition are basically destructive in nature and have a high incidence of undesirable and bothersome side effects.[7] Both medical and surgical treatment for essential blepharospasm have been unsatisfactory.

Local injection of botulinum toxin A has been extensively evaluated for the treatment of essential blepharospasm and has been found to be effective and usually devoid of any serious side effects.

Methods of injection vary somewhat from institution to institution. The usual sites of injection are the medial and lateral portions of both upper and lower lids of the eye. Many physicians select the middle of the lower lid as a fifth injection site. For blepharospasm, the toxin is usually injected subcutaneously. The total dose injected is generally 12.5u to 25u per eye.[13,15,17] If no response is obtained with the first injection, a higher dose may be used in a repeat series of injections.

Most studies[3,8,13,14] have reported a beneficial response in more than 90% of patients. However, the effect of the injection usually wears off in about 2 to 3 months, necessitating repeat injection. Though the number of injections a patient can receive without any long-term side effects or loss of efficacy is not yet totally clear, many patients have received multiple injections without any evidence of ill effect. The immediate side effects of the injection are local, and well tolerated by the patient. These side effects include ptosis, decreased or increased tear production, lower lid flaccidity, and diplopia.[13,18] These side effects occur in 20% to 51% of patients and are usually transient.[13]

Though subtle EMG changes have been found in skeletal muscles distant from the site of injection,[19] no clinical systemic long-term side effects have been reported due to local treatment with botulinum toxin.[20,21]

Spasmodic Torticollis

This is a disabling disease characterized by severe dystonic movements of various neck muscles. Medical treatment for spasmodic torticollis has been ineffective. Surgical treatment has numerous side effects and often less than optimal results. Botulinum toxin A injection for spasmodic torticollis has shown encouraging results.[22-25]

In treatment of this condition, botulinum toxin A is injected intramuscularly at or near the motor end plate. Muscles to be injected are identified by clinical evaluation and, if necessary, by EMG guidance. The muscles exhibiting the strongest involuntary contraction, especially without the simultaneous contraction of the antagonists, are the ones usually selected for injection. The muscles most commonly injected are the sternocleidomastoid, trapezius, and splenius capitis.

The dose of botulinum toxin A used to treat spasmodic torticollis is usually much larger than that used to treat essential blepharospasm. Some patients have received as much as 280u,[21] but smaller doses are usually injected at first.[23,24] Immediate side effects are transient, mild and well-tolerated, and occur in few patients. Probably the most common side effect is transient weakness of the neck muscles. Other immediate effects, including lassitude and sleepiness, are more difficult to evaluate or attribute to botulinum toxin A, because similar non-specific side effects can occur with placebo.[24] Though long-term follow-up is not yet available in these cases, it seems clear that even this high dose does not produce any significant systemic side effects.[20,21] Results have been excellent. In a double-blind study, 14 out of 16 patients showed symptomatic improvement.[24]

Hemifacial Spasm

This is a distressing condition characterized by involuntary movements of the muscles supplied by the 7th cranial nerve. Though some patients with hemifacial spasm have underlying CNS pathology, most cases are idiopathic. Patients with the idiopathic condition have recently been treated with local injection of botulinum toxin A. In a recent study, six patients with hemifacial spasm were treated with local injection of the toxin, and all showed symptomatic improvement.[26]

Conclusion

We have described three disorders of focal muscle spasms which can be effectively and safely treated with botulinum toxin A injection. In the absence of any other effective treatment for these disorders, treatment with botulinum toxin A is fast becoming the treatment of choice for symptomatic relief. It will continue to be so until definite and lasting treatments are discovered for these conditions.

It might be mentioned that all three of these conditions can be associated with various underlying pathological conditions. Before instituting any symptomatic treatment, including botulinum toxin A injections, the patient should receive a complete neurological examination and appropriate laboratory and radiological evaluation to exclude any underlying condition. Because of the need for proper case and injection site selection and due to various practical problems that can arise in the treatment of these disorders, injections of botulinum toxin A at this stage should be undertaken by physicians who have had specific training and considerable experience in its use.

At present, botulinum toxin A is available in only a few centers in the United States as an investigational drug. Federal Food and Drug Administration approval for routine use in blepharospasm is expected soon.

References

1. Scott AB, Rosenbaum AL, Collin CC: Pharmacologic weakness of extraocular muscles. *Ophthalm* 1973;12:924-927.

2. Scott AB: Botulinum toxin injection into extraocular muscles as an alternative to strabismus surgery. *Ophthalm* 1980;87:1044-1049.

3. Jankovic J: Botulinum A toxin in the treatment of blepharospasm. *Adv in Neurol* 1988;49:467-472.

4. Katz B, et al: Botulinum therapy for apraxia of eyelid opening. *Am J Ophthalm* 1987;15:103(5):718-719.
5. Ludlow C, et al: Effects of botulinum toxin injection on speech in adductor spasmodic dysphonia. *Neurology* 1988;38(8):1220-1225.
6. Clark JR, et al: Treatment of senile entropion with botulinum toxin. *Br J Ophthalm* 1988;72(5):361-362.
7. Arthurs B, et al: Treatment of blepharospasm with medication, surgery, type A botulinum toxin. *Can J Ophthalm* 1987;22(1):24-28.
8. Fruch BR, Felt DP, Wojno TH, Musch DC: Treatment of blepharospasm with botulinum toxin: A preliminary report. *Arch Ophthalm* 1984;102:1464-1468.
9. Shore N, Seiff SR, Kopelman J: The use of botulinum toxin in blepharospasm. *Am J Ophthalm* 1985;99:542-546.
10. Mauriello JA: Blepharospasm, Meige syndrome and hemifacial spasm treatment with botulinum toxin. *Neurology* 1985;35:1499-1500.
11. Dutton JJ, Buckley EG: Botulinum toxin in the management of blepharospasm. *Arch Neurol* 1986;43:380-382.
12. Carruthers J, et al: Botulinum toxin for benign essential blepharospasm, hemifacial spasm and age-related lower eye entropion. *Can J Neurol Sci* 1987;14(1):42-45.
13. Cohen DA, et al: Botulinum injection therapy for blepharospasm: A review and report of 75 cases. *Clin Neuropharm* 1986;9(5):415-429.
14. Perman KI, et al: The use of botulinum toxin in the medical management of benign essential blepharospasm. *Ophthalm* 1980;93:1-3.
15. Tsoy EA, Buckley EG, Dutton JJ: Treatment of blepharospasm with botulinum toxin. *Am J Ophthalm* 1985;99:176-179.
16. Eston JS, Russell RW, et al: Effect of treatment with botulinum toxin on neurogenic blepharospasm. *Br Med J* 1985;29:1857-1859.
17. Scott AB, Kennedy RA, Stubbs MA: Botulinum A toxin injection as a treatment for blepharospasm. *Arch Ophth* 1985;103:347-350.
18. Patrinely JR, et al: Local side effects of botulinum toxin injections. *Adv Neurol* 1988;49:493-500.
19. Sanders DB, Massey EW, Buckley EC: Botulinum toxin for blepharospasm: Single fiber EMG studies. *Neurology* 1986;36:545-547.
20. Lange DJ, et al: Distant effects of locally injected botulinum toxin: Incidence and course. *Adv Neurol* 1986;50:609-613.
21. Olney RK, Aminoff MJ, Gelb DJ, Lowenstein DH: Neuromuscular effects distant from the site of botulinum neurotoxin injection. *Neurology* 1988;38(11):1780-1783.
22. Joseph KC, Tsui JK, Calne DB: Botulinum toxin in cervical dystonia. *Adv Neurol* 1988;49:473-478.
23. Tsui JK, et al: A pilot study on the use of botulinum toxin in spasmodic torticollis. *Can J Neurol Sci* 1985;12(4):314-316.
24. Tsui JK, et al: Double-blind study of botulinum toxin in spasmodic torticollis. *Lancet* 1986;2(8501):245-247.
25. Jankovic J, Orman J: Botulinum toxin for cranial-cervical dystonia: A double-blind controlled study. *Neurology* 1987;37:616-623.
26. Tolasa E, Marli MJ, Kulisensky J: Botulinum toxin injection therapy for hemifacial spasm. *Adv Neurol* 1988;49:479-491.
27. Scott AB: Injection treatment of endocrine orbital myopathy. *DOC Ophthalm* 1984;58:141-145.

The Authors

PARVEEN KUMAR, M.D.
WILLIAM J. CROWLEY, JR., M.D.

The authors are from the Department of Neurology at the University of Missouri School of Medicine, Columbia, Missouri. Dr. Crowley is chairman of the department, and Dr. Kumar is director of the EMG laboratory.

Reprints

Parveen Kumar, M.D.
Department of Neurology
University of Missouri-Columbia
School of Medicine
University Hospital and Clinics
1 Hospital Drive
Columbia, Missouri 65212

Are You Up for an Adventure?

INTRAV and **MSMA** offer you the chance to see the world!

Take advantage of the traveling medical seminars offered by **INTRAV.** Offered to all Members, Families and Friends of the Missouri State Medical Association. See incredible sights and gain valuable medical information at the same time while traveling by boat, plane or train throughout the world! Trips available:

Wings Over Kenya — Departs February 9, 1990
Thailand, Nepal and India — Departs March 24, 1990
The Danube River — Departs June 6, 1990
Midnight Sun Express and Alaska Passage — Departs June 28, 1990

For more information, write:
Missouri State Medical Association
ATTN: Mary Wiegers
P.O. Box 1028
Jefferson City, MO 65102
Or phone: 314/636-5151

Don't miss out — Call today!

Missouri State Medical Association
1989-90
Policy Manual

This manual shall be a guide for MSMA members to the stand taken by the House of Delegates of the Missouri State Medical Association on issues involving Association policy.

The manual will be updated and revised according to House actions. The date in parentheses following each policy statement denotes the year it was adopted by the House.

Acupuncture

The MSMA urges the Missouri State Board of Registration for the Healing Arts to utilize such legal and statutory powers as may be available to declare that the principles apparently involved in the practice of acupuncture and shiatsu, if found to be scientifically valid and medically beneficial, would fall under the definition of the practice of medicine. (1973)

Alcohol Abuse

The MSMA continues to support the work of community-based organizations such as AA, Al-Anon, Narcotics Anonymous, and others, and it reaffirms its support of professional and public education efforts designed to alert people to the dangers of alcohol and drug abuse. In addition, the MSMA continues to support the Physician Rehabilitation Program and similar programs aimed at helping the victims of alcohol and drug abuse to recover successfully. (1987)

Board of Healing Arts

The MSMA opposes any legislation that would dilute the licensing power of the State Board of Registration for the Healing Arts to license physicians of good ethical and moral character. (1975)

Cancer — Reporting

The MSMA supports efforts to require hospitals to report to the state all malignant neoplasms, with the exclusion of non-melanomatous cutaneous malignancies. These statistical data are necessary to determine relationships between cancer control efforts and the incidence of cancer in the state. (1982)

Chiropractic

The MSMA is unaware of any scientific evidence that proves that spinal manipulation and adjustment are appropriate treatments for such health conditions as hypertension, heart disease, stroke, cancer, diabetes, and infection. Therefore, the MSMA will continue to warn the public of the health hazards of entrusting the treatment of such conditions to practitioners who maintain that all disease is caused by the misalignment of the spinal vertebrae and can be cured by manual manipulation and adjustment of the spine.

A physician may refer a patient for diagnostic or therapeutic services to another physician, licensed limited practitioner, or any other licensed provider of health care services whenever the physician feels that these services will benefit the patient. As is the case with physician referrals, limited practitioner referrals should be based on the practitioner's individual competence and ability to perform service to the patient.(1981)

Definition of Death

A person shall be considered dead if, in the announced opinion of a licensed physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous respiratory and circulatory functions. In the event that artificial means of support preclude a determination that these functions have ceased, a person shall be considered dead if, in the announced opinion of a licensed physician, based on ordinary standards of medical practice, he has experienced a total and irreversible cessation of spontaneous brain functions, including the brain stem. Death shall have occurred at the time when the relevant functions ceased. (1987)

Diagnostic Tests — Ordering Of

With the exception of not-for-profit health fairs, the MSMA is opposed to, and considers unethical, the practice of ordering laboratory studies and other diagnostic tests without evidence or indication obtained by a physician in a history and physical examination. (1989)

Dioxin

The MSMA supports an active campaign to bring accurate information on dioxin before the public to prevent irrational reaction and possible unjustified public fright and to prevent dissemination of possible erroneous information until such time as epidemiological studies have been completed. (1983)

The MSMA supports continuing monitoring of dioxin research, recognizing that to date no serious human disease has been conclusively linked to exposure to the chemical. The findings of the AMA Council on Scientific Affairs Panel on Toxic Substances are supported by the MSMA. (1985)

Drug Abuse

The MSMA supports educational programs for junior high school students that will emphasize the hazards of drug abuse. (1982)

Drugs — Generic Prescribing

The MSMA opposes governmental interference into the practice of medicine through mandated generic prescribing of drugs. (1976)

Drugs — Physician Dispensing

The MSMA supports the physician's right to dispense drugs and devices when it is in the best interest of the patient and consistent with the AMA's published ethical guidelines. (1988)

Drunk Drivers

The MSMA agrees to cooperate with the Legislature or proper agencies to remedy the dangerous problem of drunk drivers. (1974)

Education — Loans for Medical Students

The MSMA supports continued federal and state subsidized, low-interest loan programs for medical students, with properly enforced repayment. (1982)

Education — School Health

Factual, academically founded courses should be developed and implemented by the Missouri Department of Education to teach human physiology and pathophysiology at the elementary and secondary levels of the school system. (1974)

County medical societies are urged to work with local school districts to assist in providing comprehensive health education programs, and the state colleges of Missouri are urged to prepare qualified health instructors trained to integrate health concepts into all the courses they teach. (1972)

Electroconvulsive Therapy

The Association supports the deletion of requirements that legal guardians obtain court orders authorizing electroconvulsive therapy for patients who have been declared incompetent. (1983)

Emergency Care

The MSMA supports the American College of Emergency Physicians and the American College of Surgeons standards for direct medical control of pre-hospital (emergency) care by qualified physicians. (1986)

Ethics — Education in Medical School

The MSMA supports the teaching of medical ethics to medical students and resident physicians, including information on the workings of professional disciplinary agencies. (1987)

Fee Splitting

The MSMA reaffirms its support of the AMA Judicial Council's position that the acceptance of financial consideration in exchange for patient referrals, or fee splitting, is unethical and improper. (1985)

Fireworks

The MSMA supports a ban on the sale of fireworks in Missouri. (1976)

Fluoridation

The MSMA, realizing the medical importance of naturally occurring fluoride taken in proper concentration into the human body, recommends the addition of fluoride to all drinking water systems in Missouri in the concentration of one part per million. (1972)

Foreign Medical Graduates

The MSMA Council and committees are encouraged to consult with Foreign Medical Graduate groups when subjects of interest come up. All physicians, foreign medical graduates included, are encouraged to participate in their component medical societies, the MSMA, and the AMA. (1982)

Handicapped

The MSMA is involved in seeking positive ways to encourage training and rehabilitation for disabled persons. The MSMA wants to work with existing organizations to remove physical and emotional barriers that prevent people from working. (1982)

Health Care Costs

The MSMA encourages individual physicians to do their part in helping moderate increases in health care costs by avoiding overutilization and by using restraint when considering fee increases, in order to keep them in line with general cost of practice increases. (1989)

Hospital Medical Staffs — Autonomy

Since the hospital medical staff is a largely autonomous entity within the hospital, the MSMA supports the securing of separate legal counsel by medical staff members when considering matters of rules, regulations and bylaws. (1985)

Hospital Medical Staffs — Membership

The hospital medical staff cannot be forced to accept for full voting membership any member of the allied health professions. This is in keeping with the MSMA's support of existing JCAHO and AMA guidelines that state no hospital governing board can unilaterally amend the bylaws of a self-governing medical staff, nor can it unreasonably withhold approval of the bylaws. (1987)

The MSMA supports existing state statutes and regulations that delineate requirements for hospital licensure and individual eligibility for medical staff privileges. (1989)

Human Rights

The MSMA continues to support the dignity of the individual, the importance of human rights and the sanctity of human life, and continues to oppose any discrimination based on an individual's ethnic origin, religious or political beliefs, or any such reprehensible policies. (1986)

Immunization

The MSMA supports American Academy of Pediatrics guidelines for immunization of children. (1987)

Indigent Care

The MSMA urges all physicians to share in the care of indigent patients. (1988)

Insurance — Coverage for Catastrophic Illness

The MSMA supports the plan for providing catastrophic health insurance as outlined in the AMA Report MM, Annual Meeting 1986. (1987)

Insurance — Charge for Extra Claim Forms

Physicians should feel free to charge for the additional service of filing more than one insurance claims form for an individual patient, especially if different claim forms are required rather than a photocopy of the original form. (1973)

Insurance — Chemotherapeutic Costs

The MSMA should sponsor appropriate legislation that would make mandatory the offering of insurance coverage for reimbursement of chemotherapeutic costs, particularly when the therapy is administered on an outpatient basis. (1977)

Insurance — Insurance Company Communications

The MSMA urges health insurance companies to cease to communicate abusive and inappropriate language to patients regarding their physicians' fee structures and services. (1985)

Insurance — Maternity Coverage

The MSMA supports inclusion in all insurance policies for those in childbearing years of a clause providing complete maternity coverage.

In order to provide continuity of coverage, the following eligibility period should be written into all insurance policies concerning benefits for obstetric care: "A pregnancy which begins while the insurance is in force should be covered until the termination of the puerperium and until the newborn infant is discharged from the hospital to home care." (1974)

Insurance — New Waiting Periods

The MSMA believes employees should not have to undergo a new waiting period for coverage of pre-existing illness whenever their employer changes insurance companies, particularly when the change is being made in the interest of controlling health care coverage costs. (1985)

Insurance — Psychiatric Illnesses

The MSMA recommends that the state require all health and accident insurance policies sold in Missouri to provide coverage for psychiatric illnesses equivalent to benefits for other medical and physical illnesses. (1978) Reaffirmed (1985)

Insurance — Right to Know

The MSMA encourages all third party payors to provide an easily understood explanation of their benefits and coverage to their policyholders. (1986)

Insurance — Terminology

The MSMA encourages local insurance carriers to be careful about using literature containing the wording "usual, customary and reasonable" when describing insurance benefits paid. This leads some patients to believe physicians' charges are "unreasonable." The MSMA also encourages physicians to include in their patient information materials an explanation as to why the amount billed may sometimes be more than the insurance benefit paid. (1982)

Laboratory — Collecting Fee

The MSMA supports payment under Medicaid to the physician for his service in collecting a specimen for tests performed in an outside laboratory. (1977)

Licensing — Federal

The MSMA opposes any moves to require federal licensure of health manpower. (1976)

Malpractice — Countersuits

Any Missouri physician found not to be negligent in a malpractice suit shall have the assistance of the MSMA in determining if there exists a reasonable basis for the physician to commence an action for malicious prosecution arising out of such case. (1976)

Mandated Second Opinion

The MSMA suggests that the physician who renders a mandated second opinion for a proposed surgical procedure not accept that person as a patient for the proposed surgical procedure. (1987)

Mandatory Assignment

The MSMA is opposed to mandatory assignment under Medicare. (1984)

The MSMA is opposed to the withholding of medical licensure based on the physician's non-acceptance of Medicare assignment. (1987)

Medical Examiner System

The establishment of a county medical examiner system as a replacement for the county coroner system is strongly recommended. (1971)

Medicare-Mandated Restrictions

The MSMA opposes Medicare-mandated restrictions on any laboratory tests, referrals, medical examinations or any financial arrangements that might be agreed upon between physician and patient. (1988)

Mentally Incompetent Patients — Hospitalization

The MSMA urges extension of the time limit from 7 to 21 days before the family of a mentally incompetent patient must petition the court for continuation of a hospitalization. (1985)

Motorcycle Head Gear

The MSMA urges all motorcyclists to wear protective head gear (helmets) to prevent death and disability. (1977)

MSMF Loans

The Missouri State Medical Foundation requires membership in the state medical association for those medical students eligible for membership and receiving assistance from the Foundation. (1980)

Nursing Education

The MSMA supports all present forms of nursing education as being essential to meeting the health care needs of the state and local community. (1980)

Nurse Practitioners

The MSMA supports the doctrine that physicians should retain control of medical care and will challenge any person who is practicing medicine without a license, in the courts of law if necessary. (1978)

Peer Review Organization Data

The MSMA asks that data from the Missouri Patient Care Review Foundation concerning decision-making criteria for Medicare admission be made available to Missouri physicians as a way to ensure that denials are not having a negative impact on the quality of medical care for these patients. (1985)

The MSMA supports the current AMA program of data collection on the costs of PRO implementation and the inequities in the PRO system. (1987)

Physician as Patient Advocate

The MSMA affirms its support of the physician in the role of patient advocate in the consumption of health care services, particularly when this role conflicts with the economic goals of the physician's employing third party. (1987)

Physician Assistants

The MSMA opposes state licensure or certification of additional health care personnel because there is no reason to accept a second class or second level of medicine. (1979)

Physician — Right to Choose

The MSMA supports the right of every physician to choose whom he or she will accept as patients and also to exercise his or her choice by the terms of contractual agreements with other physicians, medical groups, hospitals or other institutions. (1981)

Physician — Right to Hospital Privileges

The MSMA is opposed to the granting of hospital privileges to a physician based on that physician's profitability to the hospital. (1988)

Political Process

The Association encourages physicians to become Key Contacts, thereby increasing medicine's role in influencing actions taken by the Missouri General Assembly on issues of importance to our patients and our profession. (1983)

Primary Medical Care

Primary medical care shall be defined as only that care given by a licensed graduate of a medical or osteopathic school. (1977)

Registered Dietitians

The MSMA supports the concept that any person using the title "dietitian" should be a Registered Dietitian. (1987)

Smoking

The MSMA supports legislation directed at designating non-smoking areas in public places, and prohibits smoking at all MSMA House of Delegates meetings and scientific sessions held in conjunction with these meetings. (1981)

The MSMA actively supports legislation prohibiting cigarette smoking in public indoor areas. (1983)

School Bus Safety

The MSMA endorses special pre-licensing examination and investigation of prospective school bus drivers in Missouri, according to criteria established by law. (1986)

Third Party Reimbursement — Physicians

The MSMA supports equal reimbursement for equal professional services provided by a physician, regardless of his geographic location. (1982) Reaffirmed (1987)

Third Party Reimbursement — Hospital DRGs

The MSMA believes it is unfair for Medicare to grant a lower payment to rural hospitals, as compared to urban hospitals, for patient care under the same DRG. (1988) Reaffirmed (1989)

Utilization Review — Reimbursement

In those hospitals that conduct utilization review of any inpatient care, compensation of physicians for such review is a legitimate expense. The cost of such review should be included in hospital rates and reimbursable costs regardless of the source of payment. (1976) ■

This space contributed
as a public service.

GIVE SMOKING A KICK IN THE BUTT.
AMERICAN CANCER SOCIETY

Created by
McCaffrey and McCall, Inc.

Most patients need only one.

K-DUR™ 20 (potassium chloride) 20mEq | Microburst Release System™ Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System™
(potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1 For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3 The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity

I002004

13944326
Rev. 4/87

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

Can you top this?

* Compare these graded premium whole life rates with any term:

Age	*$100,000*	*$250,000*	*$500,000*	*$1,000,000*
30	$118	$ 195	$ 371	$ 695
35	120	201	384	725
40	149	253	480	935
45	179	322	615	1205
50	221	405	770	1535
55	314	593	1160	2295
60	506	998	1974	3915
65	837	1700	3384	6725

Non-Smoker Annual Rates Shown

- ★ Premiums are guaranteed for the first 5 policy years.
- ★ Convertible to any level premium whole life offered by company.
- ★ Premiums increase each year to age 75 then level.
- ★ Rated an "A" Excellent Life Company by A. M. Best Co.

For more information, return this form or contact:

Wes Woodbury & Associates
323 Seaport Circle
P.O. Box 297
Liberty, MO 64068-0297
816-792-2811

Amount of insurance $ ____________

Date of Birth ____________

Smoker/Non-Smoker (circle one)

Name ____________

Address ____________

City/State ____________

Zip ____________ Phone ____________

Proposed Changes in the MSMA Constitution and Bylaws

REPORT OF THE COMMITTEE ON CONSTITUTION AND BYLAWS

Last year, the House of Delegates adopted Resolution #24 (A-89), which calls for the establishment of an MSMA Committee on Biomedical Ethics.

In August, the Executive Committee recommended, and the MSMA Council concurred, that the name of the MSMA Judicial Council be changed to the Council on Ethics and Judicial Affairs, and that the duties described in Resolution #24 (A-89) be assigned to this new council.

In accordance with the MSMA Constitution and Bylaws, the following amendment to the Constitution is submitted. It is to lie on the table until the 1991 Convention, when it will be proposed once again for a final vote before this House. (Bracketed material to be deleted; underlined material to be added.)

Article VI. [Judicial Council] Council on Ethics and Judicial Affairs

The [Judicial Council] Council on Ethics and Judicial Affairs shall be the judicial body and the educational and supportive forum for biomedical ethics of the Association. It shall consist of five active members nominated by the President and elected by the House of Delegates.

In accordance with the MSMA Bylaws, the following amendment to the Bylaws is proposed. (Bracketed material to be deleted; underlined material to be added.)

Chapter XIV. [Judicial Council] Council on Ethics and Judicial Affairs

Section A. The [Judicial Council] Council on Ethics and Judicial Affairs shall have original jurisdiction in all questions involving Missouri State Medical Association membership, all controversies arising under the Constitution and Bylaws and under the rules of conduct as outlined in the Bylaws, and controversies between two or more component societies or their members. The [Judicial Council] Council on Ethics and Judicial Affairs shall be the judicial authority of the Missouri State Medical Association and its decisions shall be final. The [Judicial Council] Council on Ethics and Judicial Affairs shall [also] investigate general ethical conditions and matters pertaining to the relations of physicians to one another or to the public and make recommendations to the House of Delegates or the component societies. The Council on Ethics and Judicial Affairs shall be the Association's educational and supportive forum for issues of biomedical ethics.

(Other mentions of the Judicial Council in the Bylaws shall also be changed to read "Council on Ethics and Judicial Affairs.")

The MSMA Executive Committee also recommended to the MSMA Council that "half-year" dues be formally established. Further, the Committee encouraged the component medical societies to adopt a similar "half-year dues" policy for their local dues. The Council accepted their recommendations.

It was also recommended that a new dues rate be established for physicians entering their second year of practice. This rate would be 75 percent of the regular Active dues, or $225 per year. Once again, the Committee recommended that component medical societies adopt a similar policy, offering their physician members in their second year of practice a dues rate of 75 percent of the regular Active dues.

The following amendments to the Bylaws, which implement these recommendations, are presented (bracketed material to be deleted; underlined material to be added):

Chapter X. Dues and Assessments

Section 1. The annual dues of this Association shall be $300, which shall be applicable to each active member of the Association beginning in

1987 and shall be levied per capita on the active members of the component societies; physicians leaving training programs and entering practice for the first time shall be assessed dues of $150 for the first calendar year and shall be Active members; physicians entering their second year of practice shall be assessed dues of $225 for the calendar year and shall be Active members; the per capita levy for Resident members shall be $20 per year; Student members shall be assessed dues of $5 per year; Honor members shall not be required to pay dues. Dues shall be payable on January 1 of the year for which they are levied. Those members who join after July 1 of any given year shall be assessed at one-half of their regular dues rate, outlined in this section, for the calendar year in which they join.

This publication is available in microform.

University Microfilms International reproduces this publication in microform: microfiche and 16mm or 35mm film. For information about this publication or any of the more than 13,000 titles we offer, complete and mail the coupon to: University Microfilms International, 300 N. Zeeb Road, Ann Arbor, MI 48106. Call us toll-free for an immediate response: 800-521-3044. Or call collect in Michigan, Alaska and Hawaii: 313-761-4700.

☐ Please send information about these titles:

Name

Company/Institution

Address

City

State Zip

Phone ( )

University
Microfilms
International

AIM HIGH

READY FOR A CHANGE OF PACE?

The Air Force has openings for **Physician Specialists**. You can enjoy better working hours, 30 days of vacation with pay each year and a unique and enjoyable life-style for you and your family while serving your country. Ask a health professions recruiter about our outstanding pay and benefits package. Call

HEALTH PROFESSIONS
1-800-423-USAF
TOLL FREE

AIR FORCE

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

December

1 - 2 **17th Annual Diabetes Symposium: Current Topics in Diabetes for the Practicing Physician** — Location: Hyatt Regency, St. Louis Union Station. Contact: Jeanne Rogers, Kilo Diabetes & Vascular Disease Research Foundation, 1227 Fern Ridge Parkway, #100, St. Louis, MO 63141. 314/434-6500.

1 - 2 **Lipid Conference** — University of Missouri School of Medicine, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, MU School of Medicine, Columbia, MO 65212. 314/882-4105

1 - 3 **Cardiovascular Medicine Legal Environment: Medicine's Response** — Location: San Diego Marriott and Marina, San Diego, CA. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

2 **Immunology Symposium: Modulating the Immune Response to Benefit the Patient** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

5 - 7 **Introduction to Doppler Echocardiography** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 9 **The Head-Injured Patient: Advances in the '80's** — Location: Hyatt Regency at Union Station, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 9 **12th Annual Advances in Trauma Course** — Location: Westin Crown Center, Kansas City, MO. Contact: Ms. Carol Williams, Trauma Department, American College of Surgeons, 55 East Erie Street, Chicago, IL 60611. 312/664-4050, ext. 342.

13 **Hysteroscopy Workshop for Gynecologists** — Location: DePaul Health Center, Bridgeton, MO. Contact: Mark Schomburg, Missouri Laser Institute, 222 South Woods Mill Road, Chesterfield, MO 63017. 314/542-2229.

20 **Diagnosis and Management of Aggressive Non-Hodgkin's Lymphomas** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

1990

January

5 - 6 **Lung Cancer** — Location: University of Missouri-Columbia School of Medicine, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, MU School of Medicine, Columbia, MO 65212. 314/882-4105.

9 - 11 **Introduction to Doppler Echocardiography** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

12 **Clinical Conference in Otolaryngology: Treatment of Cutaneous Malignancies** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

17 **AIDS: Treatment of the Disease and Associated Infections** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 E. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

18 **Office Treatment of Common Cardiovascular Problems** — Location: Hyatt Regency Hotel at Union Station, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

20 **Ellis Fischel Tumor Board: Clinical Applications of Flow Cytometry as a Prognostic Tool in Solid Tumors** — Location: Ellis Fischel State Cancer Center, Columbia, MO. Contact: Jack Wax, Program Development, Ellis Fischel State Cancer Center, 115 Business Loop 70 West, Columbia, MO 65203. 1-800-392-2545, ext. 250.

22 - 24 **NIH Consensus Development Conference: Noise and Hearing Loss** — Location: Masur Auditorium, National Institutes of Health, Bethesda, MD. Contact: William H. Hall, Office of Medical Applications, National Institutes of Health, Bethesda, MD 20892. 301/496-1143.

19 - 21 **Advanced Trauma Life Support Instructor/Provider Course** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Mary Keegan, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8365.

22 - 26 **Medicolegal Death Investigator Training Course** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Mary Fran Ernst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/725-1884.

February

1 - April 1 **31st Annual Postgraduate Institute For Pathologists in Clinical Cytopathology - Home Study Course A** — Location: Home Study Course offered by Johns Hopkins University School of Medicine, Baltimore, MD. Contact: John K. Frost, M.D., or Ms. Betty Ann Remley, 111 Pathology Bldg., Johns Hopkins Hospital, Baltimore, MD 21205. 301/955-8594.

6 - 8 **Introduction to Doppler Echocardiography** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 10 **10th Annual Conference on Peritoneal Dialysis** — Location: Loews Anatole Hotel, Dallas, Texas. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

9 **Pediatrics: Neonatology** — Location: Research Medical Center, Kansas City, MO. Contact: Michelle J. Macek, R.N., The Ed Bixby Institute for Postgraduate Medical Education, Research Medical Center, 2316 E. Meyer Blvd., Kansas City, MO 64132. 1-816/276-4306.

14 **Prostate Cancer** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

16 **Clinical Conference in Otolaryngology: Contemporary Laser Surgery** — Location: St. John's Mercy Medical Center, von Gontard Conference Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

21 - 23 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

23 - 25 **Current Clinical Applications of Cardiac Ultrasound** — Location: Vail, Colorado (location pending). Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

March

2 **Concepts of Supportive Cancer Care** — Location: St. Luke's Hospital Institute for Health Education, St. Louis, MO. Contact: Laura Klaus, Director of Professional Education, American Cancer Society, 1280 Research Blvd., St. Louis, MO 63132. 314/567-9730 or 1-800-727-0395.

2 **Preceptors Day** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

2 - 4 **Organizational Systems** — Location: University of Missouri, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

3 - 4 **Family Practice Update** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

8 **Tobacco Conference 1990: A Forum for Professionals** – Location: Capitol Plaza Hotel, Jefferson City, MO. Contact: Monica H. Eischen, Missouri Department of Health, Division of Chronic Disease Prevention and Health Promotion, 201 Business Loop 70 West, Columbia, MO 65203. 314/875-2218.

12 - 13 **Critical Care Update** – Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, Office of Continuing Education, MA215 Health Sciences Center, MU School of Medicine, Columbia, MO 65212. 314/882-4105.

16 **Clinical Conference in Otolaryngology: Update in Neurotology** – Location: St. Louis University Learning Resources Center, St. Louis University Medical Center, 1402 S. Grand Blvd., St. Louis, MO 63104-1083. 314/577-8167.

16 **Eighth Annual Symposium on Geriatric Medicine** – Location: Breckenridge Inn Frontenac, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

21 **Cancer of Unknown Primary Site** – Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

23 - 24 **Advanced Trauma Life Support Provider Course** – Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Mary Keegan, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8365.

April

3 - 5 **Introduction to Doppler Echocardiography** – Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

6 - 8 **Microsurgery of the Lumbar and Cervical Spine** – Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

18 **New Imaging Modalities in Cancer Diagnosis** – Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 E. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

21 **New Directions in Cardiology: Update in Invasive & Non-Invasive Therapies** – Location: Hyatt Regency Hotel at Union Station, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

23 - 27 **Medicolegal Death Investigator Training Course** – Location: St. Louis University Learning Resources Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

23 - May 4 **31st Annual Postgraduate Institute for Pathologists in Clinical Cytopathology –In-Residency Course B** – Location: Johns Hopkins Medical Institutions, Baltimore, MD. Contact: John K. Frost, M.D., or Ms. Betty Ann Remley, 111 Pathology Bldg., The Johns Hopkins Hospital, Baltimore, MD 21205. 301/955-8594.

May

3 - 5 **Cardiovascular Medicine Legal Environment: Medicine's Response** – Location: Don CeSar Beach Resort, St. Petersburg, Florida. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 - 10 **Introduction to Doppler Echocardiography** – Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

16 **Hematopoietins, Biologics, and Marrow Transplantation in the Treatment of Common Solid Tumors** – Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

27 - 31 **19th Annual Scientific Asembly - American College of Emergency Physicians State Chapter of California** – Location: Sliverado Country Club, Napa, CA. Contact: CAL/ACEP office, 505 N. Sepulveda Blvd., Suite 12, Manhattan Beach, CA 90266. 213/374-4039 or 1-800-SEK-ACEP.

June

6 - 10 **7th Annual Meeting of the Southern Orthopaedic Association** — Location: Hyatt Regency Hotel, Maui, Hawaii. Contact: Jeanette Stone, Southern Orthopaedic Association, 35 Lakeshore Drive, P.O. Box 190088, Birmingham, AL 35219-0088. 205/945-1848.

8 - 9 **Primary Pediatrics** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, MU School of Medicine, Office of Continuing Education, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20 **Ovarian Cancer** — Location: Jewish Hospital, St. Louis, MO. Contact: Alan P. Lyss, M.D., Jewish Hospital, 216 S. Kingshighway, P.O. Box 14109, St. Louis, MO 63178. 314/454-7000.

Now Available

Catalog of Audiovisual Programs: A Resource Guide for Teaching and Continuing Medical Education

Produced under the auspices of the Office of Educational Resources' AV Library at the University of Missouri-Kansas City, this 6th edition describes more than 2,500 programs in the UMKC Audiovisual Library collection. Each program title is listed with an abstract, author, copyright date, media format, producer, and other pertinent information. All titles are cross-referenced in a subject specialty index and a User's Guide provides information concerning policy and services.

If you are interested in obtaining accredited continuing medical education on video, the new catalog describes the procedure for aquiring AMA Category 1 CME credit free of charge through the AV Library. A one week rental rate of $10.00 per program is available for physicians residing in the state of Missouri. There is also a $12.50 fee for the catalog.

All inquiries should be addressed to UMKC School of Medicine, AUDIOVISUAL LIBRARY, 2411 Holmes St., Kansas City, MO 64108-2792, or call 816/276-1864 or 276-1832.

Most insurors try to cover you
with one standard policy.

COASTAL EMERGENCY SERVICES OF ST. LOUIS, INC.

Partners in Healthcare Management

EMERGENCY MEDICINE OPPORTUNITIES

We are currently seeking physicians for full/part-time positions in the states of Kansas, Missouri, Iowa and Nebraska.

Positions include competitive compensation packages, liability insurance, scheduling flexibility and benefits.

Candidates must have prior E.D. experience and ACLS/ATLS certification.

Please contact CES at 425 N. New Ballas, Suite #200, St. Louis, Missouri 63141, or call in Missouri (314) 432-0210 or (800) 326-2782 for more information.

MISSOURI

Emergency Medicine or Family Practice Opportunities

Family Practice – St. Louis: Join 15 member physician group providing coverage for five clinics. BC/BE FP with experience in female medicine. Hours Monday through Friday.

Emergency Medicine – Near Kansas City: Located one hour from Kansas City. Emergency Department staff position. ED volume 8,000 annually.

All independent contract physicians with Spectrum are offered:
- a guaranteed competitive rate of reimbursement
- occurence malpractice insurance coverage
- allowance for CME, professional dues and relocation expenses

For complete information, contact:

Mary Dwyer
Spectrum Emergency Care, Inc.
P.O. Box 27352
St. Louis, MO 63141
1-800-325-3982, ext. 3031

We offer three.

At Risk Control Associates, we understand that every physician's practice is unique.

That's why we have three separate types of medical liability insurance. Not only do we offer Claims Made and Occurrence Policies, but we're the first in the country to offer a Claims Paid Policy that can save you thousands of dollars a year in premiums.

Call today for a free coverage evaluation or more information. Because when you need it, the right kind of liability coverage isn't expensive. It's priceless.

RISK CONTROL ASSOCIATES, INC.
MEDICAL LIABILITY INSURORS

1111 SOUTH GLENSTONE, SUITE 3-102, SPRINGFIELD, MO 65804
417 862-0650 TOLL FREE 1-800-422-5122

Who cares about your viewpoint?

We do. At MDA, we believe the key to liability coverage you can depend on is being insured by a company that looks at things from your perspective.

MDA was founded by physicians 14 years ago and continues to be physician-run and owned. We understand the risks you face in practice every day because we've stood in your shoes. We're able to put your needs first because we know what they are.

If you're looking for an insurer who knows what it's like to practice in today's environment, find out more about our *Medical Professional Liability Insurance* at **1-800-492-7212**. We share your view.

Medical Defense Associates
P.O. Box 3817
Springfield, MO 65808-3817
1-800-492-7212

New Members

■ **Michael A. Albritton, M.D.,** 1423 North Jefferson, Springfield 65802, has become a member of the Greene County Medical Society. Dr. Albritton received his preliminary education at Northeast Louisiana University and obtained his medical degree at the Louisiana State University Medical Center-Shreveport in 1977. He completed his residency at the University of Virginia Hospital, Charlottesville, VA. Dr. Albritton specializes in radiation oncology.

■ **James E. Benecke, M.D.,** 3635 Vista Avenue at Grand Blvd., P.O. Box 15250, St. Louis 63110-0250, has become a member of the St. Louis Metropolitan Medical Society. Dr. Benecke obtained his medical degree at Indiana State University School of Medicine in 1978. He completed his residency at St. Vincent Hospital, Los Angeles, CA. Dr. Benecke specializes in otology/neurotology and otolaryngology.

■ **Mary A. Butler, M.D.,** 8900 Ward Parkway, Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Butler received her preliminary education and obtained her medical degree at the University of Missouri-Kansas City in 1985. She completed her residency at St. Luke's Hospital, Kansas City, MO. Dr. Butler specializes in anesthesiology.

■ **Christina M. Diaz, M.D.,** 11155 Dunn Rd., Suite 202N, St. Louis 63136, has become a member of the St. Louis Metropolitan Medical Society. Dr. Diaz obtained her medical degree at the University of Iowa in 1985. She completed her residency at Washington University, St. Louis, MO. Dr. Diaz specializes in neurology.

■ **D'Ann E. Duesterhoeft, M.D.,** Department of Anesthesiology, Barnes Hospital, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Duesterhoeft obtained her medical degree at Johns Hopkins University School of Medicine in 1987. She is completing her residency at Barnes Hospital, St. Louis, MO. Dr. Duesterhoeft specializes in anesthesiology.

■ **Matthew F. Emons, M.D.,** 2900 Lemay Ferry Rd., Suite 225, St. Louis 63125, has become a member of the St. Louis Metropolitan Medical Society. Dr. Emons obtained his medical degree at the University of Illinois in 1983. He completed his residency at Maricopa Medical Center, Phoenix, AZ. Dr. Emons specializes in internal medicine.

■ **Elmer T. Irinyi, D.O.,** 313 S. 169 Hwy., Gower 64454, has become a member of the Buchanan County Medical Society. Dr. Irinyi obtained his osteopathic degree at the Des Moines College of Osteopathic Medicine and Surgery in 1942. He completed his residency at Cleveland Osteopathic Hospital, Cleveland, Ohio. Dr. Irinyi specializes in general practice.

■ **Timothy S. Loth, M.D.,** 3635 S. Grand at Vista, St. Louis 63110-0250, has become a member of the St. Louis Metropolitan Medical Society. Dr. Loth obtained his medical degree at Albert Einstein College of Medicine-New York in 1980. He completed his residency at Fitzsimmons Army Medical Center, Aurora, CO. Dr. Loth specializes in orthopedic surgery.

■ **Robert R. Morrison, M.D.,** 8900 Ward Parkway, Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Morrison received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1985. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Morrison specializes in anesthesiology.

■ **Stephen K. Morrison, M.D.,** 1001 E. Primrose, Springfield 65807, has become a member of the Missouri State Medical Association. Dr. Morrison received his preliminary education at the University of Arkansas and obtained his medical degree at St. Louis University in 1982. He completed his residency at the University of Arkansas Medical School, Little Rock, AR. Dr. Morrison specializes in cardiothoracic surgery.

■ **James G. Neal, M.D.,** 1721 Elfindale, Suite 301, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Neal received his preliminary education at Texas A & M University and obtained his medical degree at the University of Texas Medical Branch-Galveston in 1978. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Neal specializes in psychiatry.

■ **Frederick M. Schekorra, D.O.,** 300 S. Monroe, Versailles 65084, has become a member of the Lake of the Ozarks County Medical Society. Dr. Schekorra received his preliminary education at Northeast Missouri State University and obtained his osteopathic degree at the Kirksville College of Osteopathic Medicine in 1984. He completed his residency at Normandy Osteopathic Hospitals, St. Louis, MO. Dr. Schekorra specializes in general practice.

■ **Martin P. Schmidt, M.D.,** 6651 Chippewa, Suite 224, St. Louis 63108, has become a member of the St. Louis Metropolitan Medical Society. Dr. Schmidt obtained his medical degree at St. Louis University School of Medicine in 1986. He completed his residency at Cardinal Glennon Children's Hospital, St. Louis, MO. Dr. Schmidt specializes in pediatrics.

■ **Wade M. Shipman, D.O.,** 1900 S. National, Suite 1880, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Shipman received his preliminary education at Northeast Missouri State University and obtained his osteopathic degree at the Kirksville College of Osteopathic Medicine in 1981. He completed his residency at Brooke Army Medical Center, San Antonio, TX. Dr. Shipman specializes in anesthesiology.

■ **Porter Smith, M.D.,** 1231 First,

Kennett 63857, has become a member of the Dunklin County Medical Society. Dr. Smith received his preliminary education at the School of the Ozarks and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1977. He completed his residency at the University of Missouri School of Medicine, Columbia, MO. Dr. Smith specializes in ophthalmology.

■ **David L. Weinstein, M.D.**, 2821 N. Ballas Rd., Suite 255, St. Louis 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Weinstein obtained his medical degree at the St. Louis University School of Medicine in 1985. He completed his residency at Barnes Hospital, Washington University Medical Center, St. Louis, MO. Dr. Weinstein specializes in obstetrics/gynecology.

■ **John B. Weltmer, Jr., M.D.**, 12615 Old Tesson Road, St. Louis 63128, has become a member of the St. Louis Metropolitan Medical Society. Dr. Weltmer received his preliminary education and obtained his medical degree at the University of Missouri-Kansas City in 1982. He completed his residency at McLaren General Hospital, Flint, MI. Dr. Weltmer specializes in orthopedics.

If arthritis is just minor aches and pains, why is it the number one crippling disease in America?

IT'S TIME WE TOOK ARTHRITIS SERIOUSLY.

ARTHRITIS FOUNDATION ®

In Memoriam

■ **Alvin J. Baer, M.D.**, died October 18, 1989 at the age of 91. Dr. Baer, an ophthalmologist, practiced medicine in the Kansas City area for more than 45 years before he retired in 1980. He was chief of staff at Menorah Hospital in 1952. He was also a former assistant professor of ophthalmology at the University of Kansas Medical Center. He obtained his medical degree at the University of Michigan in 1927. Dr. Baer was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Gordon P. Barnett, M.D.**, died October 7, 1989 at the age of 85. Dr. Barnett, a surgeon, practiced medicine in Kansas City for more than 40 years before retiring in 1969. He obtained his medical degree at the University of Missouri-Columbia in 1926. Dr. Barnett was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Louis Porter, M.D.**, died September 28, 1989 at the age of 77. Dr. Porter, an anesthesiologist, practiced medicine in Kansas City for more than 40 years. He had been chairman of the anesthesiology department at Menorah Hospital from 1946 until the mid-1970s and was president of the hospital staff in 1963-64. He obtained his medical degree at Tufts Medical School in 1937. Dr. Porter was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **James W. Weigel, M.D.**, died October 10, 1989 at the age of 67. Dr. Weigel, a general practitioner, practiced medicine in New Jersey for the first 20 years of his career. He moved to Columbia and worked at the MU Student Health Center for 12 years before retiring in 1984. He obtained his medical degree at the University of Buffalo Medical School in 1951. Dr. Weigel was a member of the Boone County Medical Society.

Medical School News

University of Missouri - Columbia

■ An endowment has been established in MU's ophthalmology department in the name of the late **Larry G. Piepergerdes, M.D.** Dr. Piepergerdes, a 1965 School of Medicine graduate, served on the MU faculty for two years before establishing a successful practice in Kansas City and later serving as president of the Missouri State Medical Association. He died unexpectedly in November 1988 while bird hunting. A $5,000 gift started the residents' library fund, which to date, has collected more than $15,000 in donations from MU faculty and past residents from the department. Income from the fund will be used to provide the latest books and other learning materials for the education of current and future ophthalmology residents.

■ **Imelda S. Bulatao, M.D.**, assistant professor of pathology, and **John DeSpain, M.D.**, assistant professor of dermatology and pathology, are now offering innovative dermatopathology services to interested community physicians. Tissue processing and slide consultations are available. For information, please call 1-800-877-7197, Ext. 1221.

■ **Bernard D. Beitman, M.D.**, professor of psychiatry, recently was awarded a two-year, $103,680 grant by the Sandoz Research Institute. The award supports a study of the effectiveness of a new drug in the treatment of outpatients with generalized anxiety disorder. His co-investigator is **Johnna L. Russell, M.D.**, assistant professor.

■ **David P. Clark, M.D.**, assistant professor of dermatology, recently presented results of a survey of dermatologists to the Literature Selection Technical Review Committee of the National Library of Medicine. He also served as a visiting professor in October at the University of Arizona.

■ **Dana Clippard, M.Ed.**, joint faculty in the department of physical medicine and rehabilitation, presented a paper on current approaches to habilitating children with attention deficit hyperactivity disorder at the third annual conference of the American Academy for Cerebral Palsy and Developmental Medicine in San Francisco. Clippard co-authored the paper with five other researchers.

■ **Armando R. Favazza, M.D.**, professor and associate chairman of psychiatry, recently was re-elected secretary-treasurer-elect of the American Association of Social Psychiatry. He also is editor of the organization's newsletter.

■ **Martin Katz, Ph.D.**, research assistant professor at the Mason Institute of Ophthalmology, gave a presentation on prevention of age-related diseases of the retina, October 4, at the annual meeting of the American College of Clinical Gerontology in Washington, D.C.

■ **Jennifer Kirby**, who is completing her Ph.D. dissertation, is a new part-time clinical instructor in the department of physical medicine and rehabilitation. She will be responsible for outpatient neuropsychology evaluations and some outpatient psychotherapy. Kirby was in the Mid-Missouri Psychology Internship Consortium and also has worked at Mid-Missouri Mental Health Center.

■ **Paul Robert Myers, M.D., Ph.D.**, assistant professor of medicine and physiology, has received three grants to fund his research. He recently was awarded a Veterans Adminstration Merit Review Grant, a V.A. Research Career Development Award and a grant from the American Heart Association (Missouri Affiliate).

■ **Karl D. Nolph, M.D.**, professor and director of nephrology, was named one of 26 outstanding United States nephrologists by *Town & Country* magazine in its October issue. He recently gave presentations on peritoneal dialysis at meetings in Taipei, Taiwan; Hong Kong; Hakone, Japan; and Bordeaux, France. A new book he co-edited, *Continuous Ambulatory Peritoneal Dialysis in the USA*, recently was released, in addition to the third edition of *Peritoneal Dialysis*, of which he is the sole editor.

■ **Arthur J. Robins, Ph.D.**, professor of psychiatry and section chief, was a panelist at the 1989 Missouri Governor's Conference on Aging, held September 18-20 in Springfield, Missouri. Robins also has been appointed editorial adviser to *INTAN Journal*, published by the Malaysian government's National Institute of Public Administration. The journal is widely circulated among countries in the Association of Southeast Asian Nations, the Middle East and the Orient.

■ **James M.A. Weiss, M.D.**, professor and chairman of psychiatry, was one of 125 experts invited to participate in a Ciba-Geigy conference on bipolar disorders in September in San Francisco.

■ **David West, M.D.**, a former resident at the Mason Institute of Ophthalmology, traveled to Zurich, Switzerland, recently to speak to the European Intraocular Implant Council. Three hundred fifty ophthalmologists from around the world attended the meeting, held at the Zurich Technological Institute at Zurich University. West presented a paper published in the *American Journal of Ophthalmology* that resulted from research conducted at MU and Harry S. Truman Memorial Veterans Hospital. West now practices in Sioux Falls, S.D.

■ The department of medicine's division of dermatology has appointed two new assistant professors. **Ronald Swinfard, M.D.**, a former MU dermatology resident who practiced in Cape Girardeau, also will serve as chief of dermatology at Harry S. Truman Memorial Veterans Hospital. From 1987-89 he was on the faculty at East Tennessee State University. **John**

DeSpain, M.D., who recently completed a dermatopathology residency at the University of Colorado, has a joint appointment as an assistant professor of pathology.

■ Two new faculty members have joined the department of psychiatry: **Johnna L. Russell, M.D.**, and **S. Jay Lensgraf, M.D.**, both assistant professors. Russell, a graduate of the University of New Mexico School of Medicine, completed a fellowship in psychosomatic medicine at Duke University in June. She also completed residencies in neurology and psychiatry at Easter Virginia Medical School and a residency in pathology (immunology) at Barnes Hospital in St. Louis and is nearing completion of her Ph.D. in pathology (immunology). She is associate director of the psychiatry consultation/liaison service at University of Missouri Hospital and Clinics and is actively involved in teaching and research in the areas of psychopharmacology and psychoneuroimmunology.

Lensgraf, who received his medical degree from the University of Oklahoma, completed psychiatric residency training there in June, following a transitional internship at Deaconess Hospital in St. Louis. He is clinical director of the University service inpatient unit at Mid-Missouri Mental Health Center and is involved in teaching and research related to schizophrenia and affective disorder.

■ Three faculty members from the division of cardiology presented papers at the 62nd Scientific Sessions of the American Heart Association held November 13-16 in New Orleans. They are **Greg Flaker, M.D.**, associate professor; **Daniel Villarreal, M.D.**, assistant professor; and **Richard Webel, M.D.**, assistant professor. **Martin Alpert, M.D.**, professor, presented a paper at the Central Society for Clinical Research annual meeting in Chicago on November 8. **M.S. Sharaf El-Deane, M.D.**, assistant professor, recently presented two papers at the third International Meeting of Arab/American Physicians in Aleppo, Syria.

■ The department of ophthalmology on October 6 and 7 sponsored and hosted the second annual meeting of the Heart of American Vision Group, which consists of vision researchers from Missouri and Kansas. It included 19 presentations by investigators from MU, the University of Kansas Medical Center, Kansas State University, the Kirksville College of Osteopathic Medicine and the Missouri Lions Eye Research Foundation. Topics discussed included the effects of aging on the retina, retina function and biochemistry mechanisms of cataract formation, glaucoma, corneal disease and visual system development.

Washington University

■ **Bradley T. Thach, M.D.**, professor of pediatrics, and **Arthur D. Loewy, Ph.D.**, professor of anatomy and neurobiology at Washington University School of Medicine have received MERIT status from the National Institutes of Health (NIH) for their five-year grants. MERIT (Method to Extend Research in Time) status guarantees both researchers uninterrupted financial support without the time-consuming paperwork and other delays traditionally associated with grant renewal application.

Thach's $740,000 grant is from the National Institute of Child Health and Human Development, part of the NIH. The grant will enable him to continue his research on the causes of Sudden Infant Death Syndrome (SIDS).

Loewy's $1,382,685 grant is from the National Heart, Lung, and Blood Institute, part of the NIH. The grant will enable him to continue his research on the neural mechanisms involved in cardiovascular control.

■ **Michael J. Welch, Ph.D.**, professor of radiation chemistry at Washington University's Mallinckrodt Institute, was named recipient of the prestigious American Chemical Society (ACS) Award for Nuclear Chemistry in recognition of his research in the field of radiopharmaceutical chemistry. His work, focusing on the labeling of chemical compounds with short-lived radionuclides, is used worldwide in biology and medicine.

The award, now in its 35th year, was established to recognize and encourage research in nuclear and radiochemistry or their applications, with the recipient being chosen from more than 30,000 ACS members.

■ Schizophrenia researcher **Terrence Early, M.D.**, has been named the first *Gregory B. Couch Scholar* at Washington University School of Medicine in St. Louis.

Early, an assistant professor of psychiatry, specializes in treatment and research on schizophrenia. His position as Couch Scholar is made possible through a donation from the family of the late Gregory B. Couch of St. Louis. As Couch Scholar, Early will work to create an expanded research program on schizophrenia that will include studies of brain imaging, clinical assessment, epidemiology, inheritance and treatment.

Early serves as director of the Junior Medical Student Clerkship in Psychiatry. His research is supported in part through the School of Medicine's McDonnell Center for the Study of Higher Cognitive Function, established in 1980 through a gift from the McDonnell Foundation to provide an interdisciplinary approach to learning more about how the brain works.

■ **Steven M. Rothman, M.D.**, associate professor of pediatric neurology at Washington University School of Medicine in St. Louis, has received a Javits Neuroscience Investigator Award from the U.S. Congress. Congress gives the Javits Awards in honor of the late Sen. Jacob K. Javits of New York, a victim of amyotrophic lateral sclerosis (ALS), more commonly known as Lou Gehrig's disease.

Rothman is the 12th Washington University faculty member to receive the prestigious award, which will provide more than $1.1 million in research funding over the next seven years. Javits Awards, given to scientists who have submitted regular research grant applications for competitive review, encourage research and training in communicative and neurological disorders. Rothman's research deals with excitatory amino acids, especially glutamate, a common amino acid found in high concentrations in the brain. The Javits Award will enable him to investigate the mechanism of glutamate neurotoxicity and how it relates to nerve cell death caused by oxygen deficiency, and the effect of prolonged glutamate release on the structure and function of developing nerve cells.

■ Researchers at Washington University School of Medicine in St. Louis need volunteers for a study on diabetes and smoking. The two-year study, sponsored by the Department of Internal Medicine's Center for Health Behavior Research, is one of the first in the country to focus on the psychological and physical factors that may influence the smoking behavior of diabetics. The study will also examine the effectiveness of methods designed to help diabetics quit smoking. Because of their illness, diabetics who smoke run an even higher risk of cardiovascular disease than the general population of smokers.

To be eligible, volunteers must be smokers, 18 years of age or older, and currently on medication for their diabetes. Subjects admitted to the study will come in twice in six months for about an hour to fill out a questionnaire and receive blood tests and information on how to quit smoking. Brief telephone sessions with a member of the study staff to determine smoking status will occur several times. All labwork will be free of charge. For more information, call the Center for Health Behavior Research, 314/361-6717, from 10 a.m. to 3. p.m.

University of Missouri - Kansas City

■ Two important awards were presented at the School of Medicine's annual Year-1 convocation October 22. **George Reisz, M.D.**, docent and associate professor of medicine, received the Excellence in Medical Education Award, which was established three years ago by an anonymous donor to recognize outstanding teaching in the medical school. The other honor went to second-year student **Ashwin Rumalla,** as the annual recipient of the *Richard T. Garcia Memorial Award.* The award was established by the family of late student **Richard T. Garcia** to honor the traits of compassion and empathy for fellow students, academic excellence, and leadership. Several hundred people attended the annual convocation at which former **Dean Harry S. Jonas, M.D.**, was the keynote speaker.

■ Three faculty members from the School of Medicine have received major awards from the University of Missouri-Kansas City. **Hans W. Uffelmann, Ph.D.**, professor of philosophy and medicine, received dual honors, as the recipient of the *Shelby Storck Award,* which goes to an outstanding teacher in the College of Liberal Arts and Sciences, and for UMKC's Public Service Award which, is designated for an individual's constructive activities outside the University. In addition, **Charles Foreman, Jr., M.D.**, associate professor of obstetrics/gynecology, received the *Pierson Award,* which recognizes outstanding teaching, and **Nevada A. Mitchell (Lee), M.D.**, clinical assistant professor, a 1979 UMKC graduate, received UMKC's Alumni Achievement Award, which recognizes graduates who have exceptional career achievement.

■ **Gloria Robinson-Lewis, Ph.D.**, recently was named coordinator of Minority Affairs for the School of Medicine. Dr. Robinson-Lewis, who most recently was with the Cooperative Extension System of Lincoln University in Jefferson City, Missouri, is responsible for developing programs, fundraising, and coordinating the School's minority recruitment and retention. She also serves as a student advocate and support referral source.

■ The First Annual *Robert W. DePond Memorial Lectureship* was held October 6, in conjunction with an October 7 memorial golf tournament. **Robert DePond** was a fifth-year medical student who died in an automobile accident this spring. **Len Scarpinato, D.O.**, assistant professor of community medicine and family practice, presented the joint research that he and and Robert DePond had been working on at the time of his death, "Case History: Exogenous Synthroid Administration as a Possible Cause of Congestive Heart Failure."

■ A group of faculty members in October won the Southwest Society for Clinical Biology's Steve Hanson Award for Outstanding Poster Presentation. **William Barnes, Ph.D., Betty Herndon, Ph.D.,** and **Larry Dall, M.D.**, received the award for "Evaluation of Cell-Adherent Polysaccharide in Slime on Staphylococcus Epidermis," which they presented at the group's meeting in San Antonio. They presented the same poster session at the Interscience Conference on Antimicrobial Agents and Chemotherapy in Houston.

■ **Perri Klass, M.D.**, physician and writer, spoke November 10 on "Mentors and Role Models: Finding a Doctor to Admire." Dr. Klass, who is an assistant in medicine and staff pediatrician at The Children's Hospital in Boston, and research physician in the Pediatric Infectious Disease Clinic at Boston City Hospital, is known for her books, which include *A Not Entirely Benign Procedure: Four Years as a Medical Student,* on her experience as a Harvard Medical School student, as well as for her articles which have appeared in publications including *The New York Times.* Her visit was sponsored by the School's Programs for Women in Medicine group and the local chapter of the American Medical Women's Association.

■ **Jim Stanford, M.D.**, docent and assistant professor of infectious disease, presented "Nosocomial Infections, A Symposium," in November at the annual fall meeting of the Southwest Clinical Society.

■ Three students are recipients of Southern Medical Association Awards. **Melissa Lawson, Derek Duke,** and **Ethiopia Gebeyehu** received the awards, which go to UMKC students in their third year, based upon academic merit and financial need.

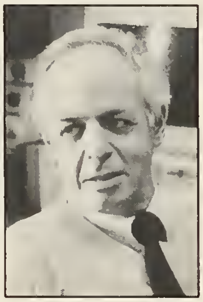
■ **Ann Smith**, professor of structural and systems biology at the University of Missouri-Kansas City School of Basic Life Sciences, has received a National Institutes of Health

(NIH) research award to study the body's use of iron in pregnancy and old age. Iron's impact on diseases such as cancer also will be examined.

The five-year, $919,972 grant will allow Smith to study the process of iron distribution to proteins in liver and cells of the immune systems. Smith's research focuses on the molecular mechanism involved as the heme molecule travels from the blood to various cells and how genetic materials, such as DNA and RNA, control this process. This information is needed to answer questions about the body's use of iron, specifically during pregnancy, old age and when infections and diseases, such as cancer, are involved.

St. Louis University

David Lagunoff, M.D., professor and chairman of the department of pathology, St. Louis University School of Medicine, has been appointed associate dean for research and assistant vice president for research development at St. Louis University Medical Center. The announcement was made by **William Stoneman, III, M.D.**, dean of St. Louis University School of Medicine, and **Arthur E. Baue, M.D.**, vice president for St. Louis University Medical Center.



In his new position, Dr. Lagunoff will assume responsibility for research administration of the medical center, including grants, research contracts, patents, institutional review board, and other activities. He will be responsible for research and development for the medical center, as well as the coordination of graduate educational programs.

Dr. Lagunoff is known for his research in mast cell physiology, particularly with respect to histamine metabolism and secretion. His laboratory is also involved with studies of mechanisms of endothelial cell retraction as an important component of the acute respiratory distress syndrome.

A $5 million grant has been awarded to **Robert B. Belshe, M.D.**, professor of internal medicine and director of the division of infectious diseases at St. Louis University School of Medicine. The National Institutes of Health (NIH) funded a five-year grant to evaluate, develop, and test vaccines against human infectious diseases other than AIDS at the school's Center for Vaccine Development. The Center for Vaccine Development has been designated by the NIH as one of six centers in the United States to evaluate and develop new vaccines.

Co-investigators from St. Louis University School of Medicine's division of infectious diseases include: **Edwin L. Anderson, M.D.**, professor and pediatric researcher; **Geoffrey J. Gorse, M.D.**, associate professor; and **T. Ulf Westblom, M.D.**, assistant professor.

St. Louis University School of Medicine's department of anatomy/neurobiology sponsored a unique hands-on workshop, titled "Microsurgery of the Lumbar and Cervical Spine," on November 3-5 at St. Louis University School of Medicine. The workshop was designed to provide an opportunity for neurosurgeons and orthopods to enhance their skills in microsurgical procedures of the spine and offered demonstrations and hands-on experience of microsurgical technique, 3-D video presentations of techniques and clinical cases, and discussion.

Paul H. Young, M.D., assistant clinical professor in the division of neurosurgery and department of anatomy/neurobiology, St. Louis University School of Medicine was director of the workshop and **Margaret H. Cooper, Ph.D**, associate professor in the departments of anatomy/neurobiology and otolaryngology-head and neck surgery was co-director. Other faculty members from the St. Louis University School of Medicine included: **John W. Fries, M.D.**, clinical professor in the department of radiology; and **Vernon L. Yeager, Ph.D.**, professor of anatomy in the department of anatomy/neurobiology.

Keynote speakers included **John A. McCulloch, M.D.**, professor in the department of orthopedic surgery, Northeastern Ohio University College of Medicine (Rootstown), and **Fred J. Hodges, III, M.D.**, professor of neuroradiology in the department of radiology, Washington University School of Medicine.

Matt H. Backer, Jr., M.D., professor and chairman of the department of obstetrics/gynecology, St. Louis University School of Medicine, has been awarded a one-year, $50,580 grant from Wyeth-Ayerst Research. The grant funds a study looking into the safety and effectiveness of combining estrogen and progesterone into a single medication for use as a postmenopausal hormone replacement therapy (HRT).

Allan J. Jacobs, M.D., associate professor of obstetrics/gynecology and director of gynecologic oncology, St. Louis University School of Medicine, has been awarded a one-year, $42,450 grant from the NeoRx Corporation. The grant is being used to fund a clinical trial of a "Rhenium-186 Labeled Monoclonal Antibody in Patients with Advanced Ovarian Cancer."

Ovarian cancer kills an estimated 12,000 women in the United States each year. The drug study is examining the effectiveness of increasing doses of a beta-emitting radioactive substance called Rhenium-186 in patients with advanced ovarian cancer. Rhenium-186, when attached to a monoclonal antibody, tends to attract to areas of cancerous growth, thereby making it possible to target radiation to the cancerous areas with minimal damage to healthy cells. Only four medical research institutions in the United States are involved in the study.

St. Louis University School of Medicine has opened an Assistive Listening Device Center. The center offers hearing impaired patients moderately-priced electronic devices to increase hearing capabilities.

Physician's Recognition Awards

Twenty-two MSMA members qualified for the MSMA-AMA Physician's Recognition Award during September 1989. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Audrain

Harry B. Cohen, *Mexico*

Boone

Charles W. Cheek, *Columbia*
James A. Schell, *Columbia*

Buchanan

Phyllis Grant Roberts, *St. Joseph*

Clay-Platte

Kenneth R. Mann, *North Kansas City*

Franklin-Gasconade-Warren

Carl E. Aulenbacher, *Washington*
Ted C. Vargas, *Pacific*

Jasper

Francis H. Corcoran, *Joplin*

Metro. Med. - Greater Kansas City

John H. Cowan, *Kansas City*
Garth F. Harrison, *Kansas City*
Elizabeth A. Jones, *Kansas City*
Hal E. Marshall, *Kansas City*
Richard E. Nelson, *Kansas City*
Elbert E. Smith, *Kansas City*
David G. Wood, *Kansas City*

Northeast

John A. Memken, *Hannibal*

St. Louis Metropolitan

David A. Anderson, *St. Louis*
Fritz A. Byrum, *Ballwin*
Arnold M. Goldman, *St. Louis*
Jerold J. Kreisman, *St. Louis*
Tara Talwar, *Chesterfield*

West Central

Robert C. Dang, *Pleasant Hill*

Employee Benefit Rx.

Before choosing the *right* medical group employee benefit plan, there's a lot to consider.

For instance, how comprehensive should an employee benefit plan be? Should your plan include Individually Directed Account options or 401(k) provisions? How do you know if you need trustee, investment management or administration services? Or plan and participant record keeping?

We can help you answer these important questions and design a program to your exact specifications.

If you're looking for the right employee benefits program for your medical group, call the United Missouri Employee Benefit Division, soon. You'll find our experts are just the "prescription" you need.

UNITED MISSOURI BANK
Member FDIC

P.O. Box 419226 Kansas City, Missouri 64141-6226
P.O. Box 1126 St. Louis, Missouri 63188
Outside of Missouri, call 1-800-821-7194
In Missouri, call 1-800-892-2945.

ARMY MEDICINE'S CHALLENGE TO HEALTH CARE PROFESSIONALS.

The Army Medical Department is the largest comprehensive system of health care in the United States. It has a tradition of medical breakthroughs, advances in health care techniques and leadership respected throughout the world of medicine. It is this team we invite — we challenge — health care professionals to join.

You could be involved in a wide variety of vital, interesting and rewarding assignments. They'll range from administrative management to direct patient care. We offer unique advantages to professionals in these disciplines:

FAMILY PRACTICE
PSYCHIATRY
RADIOLOGY
CARDIOLOGY
OB/GYN
ANESTHESIOLOGY
ORTHOPEDIC MEDICINE

As an Army Officer you'll receive substantial compensation, annual paid vacations and participate in a noncontributory retirement plan.

The challenge is yours. Look it over. Call collect or write:

AMEDD PERSONNEL PROCUREMENT AGENCY
ATTN: CAPTAIN FRED D. MACK
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2815
STATION TO STATION COLLECT CALL TO:
314/331-4378

ARMY MEDICINE. BE ALL YOU CAN BE.

Missouri Physicians' Health Committee

Jack Croughan, M.D.
Medical Director
1034 S. Brentwood, #970
St. Louis, MO 63117
314/725-4004
answering service 314/768-4990.

Carl Pearman, M.D.
Chairman
1443 N. Robberson, #803
Springfield, MO 65802
417/885-4191

Karen Sanders, BSN, RN
Program Coordinator
3839 Lindell Blvd.
St. Louis, MO 63128
314/768-4990

Thomas M. Ahmann, M.D.
Landmark Building
Mexico, MO 65265
314/581-7582

Thomas R. Anderson, M.D.
204 Berrywood Medical Arts Bldg.
3401 Berrywood Drive
Columbia, MO 65201
314/449-2661

Hugh C. Bartlett, M.D.
1100 W. 10th, #270
Rolla, MO 65401
314/364-7610

Jack Carmody, M.D.
10004 Kennerly Road, #386B
St. Louis, MO 63128
314/843-2151

James R. Criscione, Jr., M.D.
3825 S. Kingshighway
St. Louis, MO 63109
314/352-7003

Edward C. Felker, III, M.D.
1118 N. Main
Sikeston, MO 63801
314/471-6992

Edward M. Grim, M.D.
3105 McClelland Blvd.
Joplin, MO 64804
417/623-3703

K.P.S. Kamath, M.D.
35 Doctors' Park
Cape Girardeau, MO 63701
314/334-4002

David S. Martin, M.D.
3635 Vista at Grand
P.O. Box 250
St. Louis, MO 63110-0250
314/577-8025

Donald McIntosh, M.D.
300 S.W. Green Teal
Lee's Summit, MO 64063
816/537-7344

Jo-Ellyn M. Ryall, M.D.
9216 Clayton Road
Suite 105
St. Louis, MO 63124
314/868-7700

Call for Resolutions

The 132nd Annual Convention of the Missouri State Medical Association will be held April 5-8, 1990, at Marriott's Tan Tar-A Resort, Lake of the Ozarks.

Resolutions to be introduced at the 1990 House of Delegates must be submitted to MSMA Headquarters by **February 19, 1990,** to be published in the Delegate's Handbooks.

Resolutions not submitted before the deadline must be introduced under the procedure outlined in the MSMA Bylaws, Chapter III, Sect. I. Prompt submission of resolutions assures their inclusion in the Handbook and allows for their full consideration.

If you have questions regarding resolution submission, contact Jo-Ellyn M. Ryall, M.D., Speaker, MSMA House of Delegates, 9216 Clayton Rd, #105, St. Louis, MO 63124, 314/868-7700 or MSMA Headquarters.

WANTED: COVER ART

Missouri Medicine prides itself on its beautiful covers. The journal repeatedly receives compliment after compliment on its choice of cover art. You can help us to ensure that the tradition of creative covers for Missouri Medicine continues. In the past, we have featured photographs of subjects ranging from roses to animals, paintings of still lifes, scenery, flowers, buildings and more. If you have a photograph or a painting you would like to see featured on our cover, we want to see it! Send your art or photograph to: **MISSOURI MEDICINE**, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. We prefer that you send 35 mm color slides. Don't be shy — Send us your art!

Professional help for health professionals.

Substance abuse is a growing problem among health professionals. At Timberlawn Psychiatric Hospital, a special program exists to help health professionals overcome substance abuse problems.

A range of treatment options, individual and group therapy programs, and other recovery-oriented services are all geared toward the unique needs of the health professional. An individualized evaluation leads to selection of the most appropriate treatment program, which is further enhanced by specialized aftercare and monitoring services. Treatment team members include Board Certified psychiatrists, clinical psychologists, psychiatric social workers and substance abuse counselor specialists with certification in their field.

At Timberlawn, we understand the unique challenges faced by health professionals today, and we're here to help. For more details on our facility or referral arrangements, contact: Dr. Edgar P. Nace, Chief of Substance Abuse Services.

TIMBERLAWN
PSYCHIATRIC HOSPITAL
PROFESSIONALS HELPING PROFESSIONALS
4600 Samuell Blvd. • P.O. Box 11288
Dallas, Texas 75223
(214) 388-1958 • 1-800-426-4944

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, **Donald G. Sessions, M.D.,** P.O. Box 1028, 113 Madison, Jefferson City, MO 65102. The transmittal letter should designate one author as corrrespondent and include his address and telephone number.

In addition, in view of The Copyright Revision Act of 1976, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double-spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

Index to Advertisers

Air Force 826

Army Medicine 841

Army Reserve 790A

Coastal Emergency Services 831

Eli Lilly 795

Forrest T. Jones 796

Fred S. James 784

INTRAV 817

Jackson & Coker 792

Jason Pharmaceuticals 790B

Key Pharmaceuticals 823-824

Medical Defense Associates 832

Medical Protective Company 798

Merck, Sharp & Dohme 855-856

MOMEDICO 782

Palisades Pharmaceuticals 847

PIE Mutual Insurance Company 854

Risk Control Associates 830-831

Roche 800

Spectrum Emergency Care 831

StrategiCare 786, 790

Timberlawn Psychiatric Hospital 843

United Missouri Bank 840

Wes Woodbury 824

Classifieds

Physicians Wanted

INTERNAL MEDICINE — SPRINGFIELD, Missouri; join expanding 5-physician IM group; diverse primary and critical care practice; affiliation with several major teaching hospitals; modern clinic built 1985; optional teaching activitites; competitive financial package; growing metropolitan population of 230,000 near Ozark mountains; CONTACT: Phil Kelbe, Fox Hill Associates, 250 Regency, Milwaukee, WI 53186. 1-800-338-7107.

EMERGENCY PHYSICIAN — Outstanding opportunity for qualified individual to join incorporated group of three BP/BC emergency physicians in a unique, democratic and thoroughly enjoyable practice. Excellent compensation and complete career opportunities are offered in a very livable community offering a diversity of recreational and cultural pursuits. Call or write Mark Singsank, M.D., NET, PC, Emergency Department, Mercy Health Center, Dubuque, IA 52001.

EMERGENCY MEDICINE IN IL AND MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Thomas Mankiewich or Felicia Hershkowitz, staffing specialist, National Emergency Services, Inc., 255 Executive Drive, Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

OPPORTUNITY FOR WELL-TRAINED OB/GYN to associate with established physician, share call coverage. Referrals can be expected from a number of FPs. 50-mile service. **Location:** Community in central Kansas, 17,000 population. Excellent quality of life — good schools. Call Jo Grimm (1-800-638-6942).

FAMILY PRACTICE — HOSPITAL SPONSORED CLINIC OPPORTUNITY. Dynamic, growth-oriented hospital in beautiful North Central Wisconsin is seeking TWO family physicians for a new clinic facility currently being constructed. The administrative burdens of medical practice will be minimized in this hospital-managed clinic. The hospital has committed to an income and benefit package which is significantly higher than similar opportunities. Package includes base income, incentive bonus, malpractice, disability, signing bonus and student loan reduction/forgiveness program. All relocation costs will be borne by the hospital. Please contact **Dan McCormick, President, Allen McCormick, France Place, Suite 920, 3601 Minnesota Drive, Bloomington, Minnesota, 55435; 612/835-5123.**

OCCUPATIONAL MEDICINE PHYSICIAN — to join well-established group practice serving over 200 industries. Excellent compensation and full partnership potential. Responsibility include primary care, treating workmen's comp injuries, disability evaluations, medical surveillance, and development and implementation of occupational medical programs for various industries. Should be board certified/eligible, M.D. Send C.V. to: William R. Green, M.D., Macon Medical Center, 7200 Manchester, St. Louis, MO 63143, or call 314/645-7744.

PHYSICIANS NEEDED: Family Practice — Internal Medicine; Oncology — Endocrinology; Neurosurgery — Neurology; General Surgery — Orthopedic Surgery. Group practice, solo, or urgent care settings available through our hospital network located in Macon and serving all of Middle Georgia. Your practice will be located 80 miles south of Atlanta, in a growing family-oriented community, where you can avoid traffic and enjoy a rewarding professional career. Please contact Stephen Wofford at 912/741-6283 for a confidential consultation or write: P.O. Box 4627, Macon, Georgia 31208.

SURGEON OPPORTUNITY. Immediate opening for general surgeon in rural Nebraska. Board certified or board eligible. Must be licensed in Nebraska. Excellent benefits. Great hunting and fishing. Wallace & Panzer, M.D., P.C., 807 N. Ash, Gordon, NE; phone 308/282-1164.

EXCELLENT OPPORTUNITY for an internist to become associated with a 13-physician multi-specialty group located in St. Charles, Missouri. St. Charles is an excellent community to raise a family, excellent school systems, easy access to the St. Louis metro area for recreation, entertainment, with a general service area potential of 120-150,000 residents. Guaranteed first year with excellent fringe benefits and an established practice. Reply to **File #25,** C/O *Missouri Medicine,* 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

HEALTHLINE PHYSICIAN SERVICES, an affiliate of St. Louis University Medical Center, is recruiting for an Emergency Department Medical Director and Staff Physicians at Hannibal Regional, Hannibal, Missouri. Growth-oriented program in historic Missouri river town. Good compensation, benefits, paid liability. Part-time Emergency Department and locum tenens also available in Eastern Missouri and Southern Illinois. Contact William J. Salmo, HealthLine Physician Services, 3663 Lindell Blvd., Suite 410, St. Louis, MO 63108; 1-800-443-3901.

PHYSICIAN WANTED: General/Family Practice. Arkansas low malpractice rates. Semi-rural scenic Ozark Mountain community with major recreation opportunities. Near large lake and trout river. Good schools. Attractive hospital. Active medical practice seeking a Family Physician. Investment required. Reply to: **File #35,** C/O *Missouri Medicine,* 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

FAMILY/ER — Physicians needed immediately to staff our group of walk-in out-patient clinics. No hospital call!

Physicians Wanted

Paid malpractice, profit sharing, $50 minimum per hour to start and potential to $120 per hour during busy shifts. Bonus for pilots. Call Sandy McBrayer at 601/328-2525, 8 a.m. to 5 p.m. Monday thru Friday.

FAMILY PRACTICE PHYSICIAN – to join well-established group practice in St. Louis County. Must be Board Certified or Eligible for Family Practice. Excellent compensation and full partnership potential. No obstetrics. All the cultural activities of a metropolitan area available but still has midwestern flavor of life. Send C.V. to: William R. Green, M.D., Macon Medical Center, 7200 Manchester, St. Louis, MO 63143, or call 314/645-7744.

FAMILY PRACTICE – Southwest Iowa community of 7800 (servicing 27,000) seeking a family physician to join well-established 6-Doctor practice. Modern facility adjacent to 100-bed hospital. Income guaranteed first year and full partnership after first year. For additional information, write to Atlantic Medical Center, Sue Marsh, Office Manager, P.O. Box 429, Atlantic, Iowa 50022 or phone: 712/243-2850.

CLINIC PHYSICIAN: The health center at Southwest Missouri State University is seeking a third physician to help provide medical care for the university community patient population of students, faculty, staff and dependents. University physicians provide general medical care including treatment of minor emergencies and routine physical examinations for employment or participation in athletics and other university activities. Specialists in Internal Medicine, Orthopedics, General Surgery and Psychiatry consult at the health center weekly. Should the need for hospitalization or further evaluation arise, more than 400 community physicians are available for referral. Salary is competitive. Graduation from an accredited medical school is required with licensure in the state of Missouri. Board certification or board eligibility in Family Practice or extensive experience in family practice is preferred. Submit letter of interest, resume, transcripts, and names, address and phone numbers of 3 references by January 2, 1990 to Burnie Snodgrass, Director, University Health Services, Southwest Missouri State University, 901 S. National, Springfield, MO 65804. AA/EOE.

POSITION AVAILABLE – INTERNIST: Swope Parkway Health Center has an immediate opening for a full-time BC/BE Internist to work in our Adult Medicine Department. Swope Parkway Health Center is an ambulatory Health Center with primary care specialties, i.e. Pediatrics, Internal Medicine, OB/GYN, Dental, Optometry, and a large Homeless Program and Community Mental Health Center. Compensation and benefits (paid health/life insurance, pension, disability, malpractice and continuing education) are extremely competitive with incentives for Board Certification and longevity. If you are interested, please call Dasari Ratnam, M.D., or Cheryl Kelow, Personnel Director or send curriculum vitae to Swope Parkway Health Center, 4900 Swope Parkway, Kansas City, MO 64130.

KANSAS/MISSOURI: Excellent full-time and part-time opportunities in Emergency Medicine for primary care and ABEM Certified and prepared physicians. Facilities range from 3,000 - 20,000 patient visits per year. Big city amenities with good quality of life. Contact Emergency Medical Services, 3101 Broadway, Suite 1000, Kansas City, Missouri 64111, or call 1-800-821-5147.

WANTED: A general orthopedic surgeon to associate with a highly successful ORS in excellent facilities. This position offers an opportunity to enjoy and become an integral part of a Midwestern community of 17,000. Income guarantee. Call Jo Grimm 1-800-638-6942.

Practice for Sale

FAMILY PRACTICE/OFFICE BUILDING FOR SALE. With equipment & furnishing in South St. Louis County; for immediate continuous practice, option to buy building. 1300 sq. ft. office space on approximately 1/2 acre lot with 15-car parking lot. Price negotiable. Send inquiry to: **Midwest Management**, P.O. Box 31516, St. Louis, MO 63131.

FOR SALE, GENERAL PRACTICE, gross $200,000/year; 90% third party pay. Retiring after 40 years successful medical practice. Solo or group. Fully equipped brick medical building with income from rentals, also for sale, or rent with option to buy after 1 year. St. Louis Suburb, P.O. Box 5711, St. Louis, MO 63121.

Investment

$5,000-$60,000: FOR PHYSICIANS – Unsecured Signature Loans. Available for Debt Consolidation, Investments, Tuition, Relocations, Purchase of Medical Practices or any need including taxes. No points or fees. Competitive rates. Level payments up to six years. No prepayment penalty. For application, call Toll Free 1-800-331-4952, Dept. 114, MediVersal.

Real Estate

MUST SELL – Exclusive Condo unit. 2,000 Sq. Ft. – 3 Bedroom, 3 Bath. Covered wrap around porch. Lighted tennis court, spa, Olympic pool. Only 20 units in this completed development. 16 acres of forest surround this Lake of the Ozarks retreat. Main channel view at the 24 mile marker ----- $198,000.00. Owner: **Day:** 314/348-4480. **Night:** 314/348-5950.

Equipment for Sale

CAPITAL EQUIPMENT FOR SALE: Amrad xray 300 MA Floating Table Top, Ecomat 3600 Processor, 1988 Mark 4 ATL Ultrasound (OB, Echo, Cardiac Equipped), Ritter Power Tables, 3 channel computerized Fukuda EKG, Amserve single channel modem EKG transmission unit, pro-

Equipment for Sale

grammed pacer treadmill, microthermy, medcosonolator, physiocontrol defibrillator, IBM P.C. For further information, call 913/345-0061.

OPHTHALMOLOGY ESTATE. B&L Slit-lamp, complete trial lens set, lens meter, trial frame, tonometer, A/O Giantscope, arc perimeter, A/O projector with slides and screen, office magnet, instrument table, examining light, old keratometer with adjustable stand. Equipment old but good condition. $1700 for all. To see call Anthony Tarrasch, DDS, 417/881-0444, Springfield, MO.

BC/BE INTERNISTS AND FAMILY PRACTITIONERS

A balanced lifestyle, competitive income and freedom to practice quality medicine. Opportunities to join a unique primary care practice in the Chicago/St. Louis areas. Excellent financial package includes income guarantee, bonus incentive and potential for profit sharing. No billing or HMO headaches.

Send C.V. to:

Lori Jones
MedFirst Medical Management, Inc.,
5515 North Cumberland Avenue,
Suite 808,
Chicago, Illinois 60656.
Or call COLLECT: (312)774-3443.

MedFirst™ Medical Management, Inc.
CHICAGO

PRIMEDICAL Physician Care Centers
ST. LOUIS

YOCON®
YOHIMBINE HCI

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

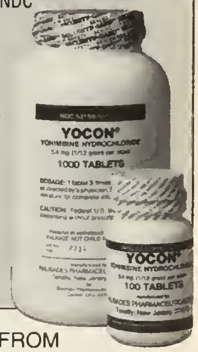
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM

PALISADES
PHARMACEUTICALS, INC.
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
1-800-237-9083

Index to Volume 86

A

A Health Care Proposal: Universal Access With Fiscal Responsibility --Tuteur --Guest Editorial 787

A New Method of Abdominal Exercise -- Ash and Burnett 213

A Phone Call -- Sessions -- Editor's Desk 263

Acute Leukemia After Adjuvant Chemotherapy for Breast Cancer -- Gabrail 689

AIDS -- It Won't Go Away -- Sessions -- Editor's Desk 373

Agee, Carson, et al -- Bronchopulmonary Sequestration 271

Alphabetical Roster of Members -- Directory 485

AMA-ERF Season's Greetings -- Auxiliary Message 797

AMA-ERF: Where does all that money go? -- Corry -- Auxiliary Message 679

Anderson, Philip C. -- Solving a Wordy Mass -- Guest Editorial 211

Arens, Max Q., and Storch -- Laboratory Diagnosis of HIV Infection --Special Series 801

A.S.A.P. -- Wankum -- Auxiliary Message 75

Ashraf, Akhtar, et al -- Magnetic Resonance Imaging: Failure to Demonstrate Spinal Arteriovenous Malformations in Four Patients 637

Ash, Charles J. and Burnett, Thomas H. -- A New Method of Abdominal Exercise 213

Autologous Blood Transfusion -- Perry and Thomas 157

Auxiliary offers opportunities for all -- Auxiliary Message -- Thomas 615

Auxiliary supports MSMF -- Gentry -- Auxiliary Message 17

Auxiliary Message --

  AMA-ERF Season's Greetings 797

  AMA-ERF: Where does all that money go? -- Corry 679

  A.S.A.P. -- Wankum 75

  Auxiliary offers opportunities for all -- Thomas 615

  Auxiliary supports MSMF -- Gentry 17

  Bloom Where You're Planted -- Barbee 265

  Enjoying Summertime -- Barbee 323

  Getting What You Pay For -- Gentry 737

  Legislative Day a Success -- Dyer 205

B

Barbee, Pattye -- Bloom where you're planted -- Auxiliary Message 265

Barbee, Pattye -- Enjoying Summertime -- Auxiliary Message 323

Bauman, Jay H. -- Glaxo presents its views -- Letters to the Editor 71

Being Inspired -- Sessions -- Editor's Desk 15

Being Tested -- Sessions -- Editor's Desk 735

Benjamin, James J. -- Making Medical Reading Count -- Guest Editorial 79

Biermann, Lou Ann, et al --Initial Results of a Program in Liver Transplantation 804

Blanke, Bill -- Error corrected -- Letters to the Editor 11

Bloom Where You're Planted -- Barbee -- Auxiliary Message 265

Blythe, James G. and Chehval, Michael J. -- Colposcopy of Condylomatous Men 31

Breast Cancer Incidence Among Women in Missouri: Implications for Cancer Control -- Brownson, Chang, Davis and Simms 809

Brems, John J., et al -- Initial Results of a Program in Liver Transplantation 804

Bronchopulmonary Sequestration -- Agee, Curtis, Lababidi, and Walls 271

Brownson, Ross C., et al -- Breast Cancer Incidence Among Women in Missouri: Implications for Cancer Control 809

Budd, Matthew A. -- Listening to Patients -- Editor's Desk 315

Burnett, Thomas H. and Ash, Charles J. -- A New Method of Abdominal Exercise 213

C

Carcinoma of the Pancreas -- Garcia and Tucker 89

Cardwell, Michael S. and Henson, Robert E. -- Fetal Echocardiography 217

Chang, Jian C., et al -- Breast Cancer Incidence Among Women in Missouri: Implications for Cancer Control 809

Chaplin, Hugh, et al -- HIV exposure in the emergency department -- Letters to the Editor 11

Chapman, Ramona -- Tobacco or Health -- Guest Editorial 81

Chehval, Michael J., and Blythe, James G. -- Colposcopy of Condylomatous Men 31

Chief Complaint -- Sessions -- Editor's Desk 791

Clark, Frank I., et al -- Erythrocyte Pyruvate Kinase Deficiency 92

Clary, William F. -- Psychiatry's Identity Disorder -- Guest Editorial 731

Classifieds -- 58,116, 189,245,299,359,435,601,664,719,775,841

Colposcopy of Condylomatous Men -- Blythe and Chehval 31

Component Society Executives -- Directory 484

Commentary -- Urine Testing in Impaired Physicians -- Croughan and Sanders 341
Continuing Medical Education -- 51,111,183,227,283,345,429,595,643,713,759,827
Corriveau, Michael L., Dolan and Rosen --Exercise Capacity Following Pulmonary Rehabilitation in the Elderly 751
Corry, Judy -- AMA-ERF: Where does all that money go? -- Auxiliary Message 679
Costello, John, et al -- Human Ehrlichiosis 691
Councilor Districts and Counties in Each District -- Directory 461
Cover Art --
  Asgaard Winter -- Kent .... January
  Autumn in Missouri -- Ford .... October
  Boys Fishing -- Ford .... July
  Laclede's Landing -- Peterson .... February
  MSMA Office -- Taylor .... September
  Melting Snow -- Tarneja .... March
  Missouri Pasture -- O'Malley .... May
  Monterey Marina -- Fries .... June
  Roses -- Schroeder .... April
  Sherwin-Williams Paint Co. Ad -- Kent .... December
  Tulip Beds: Missouri Botanical Gardens -- O'Dell August
  Wood's Grocery -- Diehl .... November
Crosby, William H. -- Lady Macbeth as a Terminal Case -- Guest Editorial 209
Croughan, Jack and Sanders -- Urine Testing in Impaired Physicians -- Commentary 341
Crowley, William J., Jr. and Kumar -- Neurological Application of Botulinum Toxin 815
Curtis, Jack J., et al -- Bronchopulmonary Sequestration .. 271

D

Dawson, Jacqueline E., et al -- Human Ehrlichiosis 691
Dr. Jekyll and Mr. Hyde -- Singleton -- President's Page .. 321
Davis, James R., et al -- Breast Cancer Incidence Among Women in Missouri: Implications for Cancer Control 809
Davis, James R., et al -- Survey of Cancer Control Attitudes Among Missouri State Legislators 95
Deaths --
  Abel, Oliver 703
  Allebach, Hobart K.B. 655
  Allen, Joseph E. 351
  Ashley, Hugh V. 434
  Baer, Alvin J. 834
  Bamshad, Jerry 771
  Barnett, Gordon P. 834
  Beasley, Louis K. 771
  Berger, Edward J. 171
  Best, Robert B. 655
  Bilsky, Nathan 171
  Blair, Vilray P. 171
  Bondurant, Bryce H. 771
  Butcher, Harvey R. 655
  Castillo, Michael E. 771
  Conrad, Joseph A. 655
  Cutcliff, Daniel J. 434
  DiLeo, Senatro W. 771
  Franklin, Curtis U., Jr. 231
  Gantner, George E. 42
  Glasscock, Ernest L. 703
  Gray, Walter C. 655
  Hall, Preston C. 771
  Hampton, Stanley F. 771
  Hays, Larry V. 655
  Henschel, Eugene V. 231
  Holscher, Edward C., Sr. 655
  Kuhn, William F., II 771
  Lachance, Leopold 42
  Lane, Clinton W. 771
  Lee, Carleton H. 655
  Lyles, Thomas O. 771
  Macauley, Bernard J. 351
  Malt, Sherwin H. 655
  Martin, Frederick W. 655
  McMurray, Herbert C. 231
  Miller, David D. 42
  Montani, Charles A. 771
  Muench, Albert H. 231
  Murphy, Robert J. 171
  Nemec, Stanley S. 656
  Ness, Carl K. 171
  Orenstein, Joseph M. 171
  Overholser, Milton D. 351
  Parsons, Eugene O. 434
  Paschino, Antonio R. 771
  Pennington, F. Eugene 656
  Piepergerdes, Larry G. 42
  Porter, Louis 834
  Portuondo, B.C. 656
  Raphel, Jose 771
  Reuter, Louis A. 171
  Roy, Joseph A. 231
  Schoeberl, C.B. 351
  Sciortino, John S. 171
  Sertl, John D. 771
  Tarrasch, Ernest L. 703
  Tuma, Arthur T. 231
  Vatterott, Paul B. 656
  Vaughn, J. Russell 656
  Wallace, Ed S. 231
  Weigel, James W. 834
  Wood, Tommy L. 171
  Woodruff, Calvin W. 656
  Young, Jesse W. 434
  Zahony, Ivan 434
  Zografakis, George H. 656
Determination of Death by Neurological Criteria -- Oro 628
Diehl, Henrietta -- "Wood's Grocery" .... November
Directory Information --
  Alphabetical Roster of Members 485
  MSMA Officers, AMA Delegates and Alternates, Councilors and Vice Councilors 448
  Code Numbers for Component Medical Societies 455
  Designated Specialty Codes 459
  Councilor Districts and Counties in Each District 461
  Guide to Component Medical Societies 462
  MSMA Committees and Commissions 472

  Directory of Medical Specialty Organizations 474
  Metropolitan Specialty Organizations 476
  Insurance Plans Available to MSMA Members 479
  Missouri Volunteer Health Agencies 480
  Component Society Executives 484
  Roster of Members By Component Society 520
Directory of Medical Specialty Organizations -- Directory 474
Dolan, Gerald F., Corriveau and Rosen --Exercise Capacity Following Pulmonary Rehabilitation in the Elderly 751
Dyer, Eileen -- Legislative Day a Success -- Auxiliary Message 205
Dyer, Gary A. -- Physicians' Charity Care Program -- Special Article 467

E

Editor's Desk -- Sessions
  A Phone Call 263
  AIDS -- It Won't Go Away 373
  Being Inspired 15
  Being Tested 735
  Chief Complaint 791
  Race, The 133
  Life and Death 675
  Rationing 203
  Thanks 73
Editor's Desk -- Budd -- Listening to Patients 315
Enjoying Summertime -- Barbee -- Auxiliary Message 323
Erythrocyte Pyruvate Kinase Deficiency -- Clark, Monzon, and O'Connor 92
Esophageal Dilation -- Tucker 220
Exercise Capacity Following Pulmonary Rehabilitation in the Elderly -- Corriveau, Dolan and Rosen 751
Exploring the Underground -- Peters 83

F

Fetal Echocardiography -- Cardwell and Henson 217
Final Disciplinary Actions -- Mo. State Board of Healing Arts 41,223
Fishbein, Daniel B., et al -- Human Ehrlichiosis 691
Fitness of the Future -- John C. Hagan, III -- Guest Editorial 269
Ford, Lisa -- "Boys Fishing" July
Ford, Thomas E. -- "Autumn in Missouri" October
Fries, William --"Monterey Marina" June
Fundraiser -- Auxiliary Message 135

G

Gabrail, Nashat Y. -- Acute Leukemia After Adjuvant Chemotherapy for Breast Cancer 689
Garcia, Delia M. and Tucker, George -- Carcinoma of the Pancreas 89
Garvin, Paul J., et al -- Initial Results of a Program in Liver Transplantation 804
Gentry, Barbara -- Auxiliary supports MSMF -- Auxiliary Message 17
Gentry, Barbara -- Getting What You Pay For -- Auxiliary Message 737
Getting What You Pay For -- Gentry -- Auxiliary Message 737
Gonzalez, Jorge J., et al -- Large Cell Lymphoma Presenting as a Coronal Penile Lesion 278
Gordon, Barry E. and Weinstein -- Impotence: Its Evaluation and Treatment 632
Guest Editorials --
  A Health Care Proposal: Universal Access With Fiscal Responsibility -- Tuteur 787
  Fitness of the Future -- Hagan 269
  I'm Afraid of What Might Be Out There! -- Wooldridge 139
  Lady Macbeth as a Terminal Case -- Crosby 209
  Making Medical Reading Count -- Benjamin 79
  Multimodality Therapy for Lung Cancer -- Perry 733
  Patients, Profits and Progress -- Perry 375
  Psychiatry's Identity Disorder -- Clary 731
  Seeing the Writing on the Wall -- Metzler 611
  Solving a Wordy Mass -- Anderson 211
  The Healthy Tan: A Modern Misnomer -- Thomas 327
  Tobacco or Health -- Chapman 81
Guide to Component Medical Societies -- Directory 462

H

Hagan, John C., III -- Fitness of the Future -- Guest Editorial 269
Harding Alfred D. and Nichols -- Late Occurrence of Aortoenteric Fistula 696
Harmon, Robert G., et al -- Survey of Cancer Control Attitudes Among Missouri State Legislators 95
Hayek, Michael E., et al -- Initial Results of a Program in Liver Transplantation 804
Henson, Robert E. and Cardwell, Michael S. -- Fetal Echocardiography 217
Hepatitis A: Analysis of a Community Outbreak -- Lovinger 27
Hinken, Betty J. -- A Plea for visibility -- Letters to the Editor 131
Hirsch, Dana -- Comments on "The Race" -- Letters to the Editor 131
Hospital Antitrust Liability in Dealings with Downstream Providers -- Testerman -- Special Article 333
Human Ehrlichiosis -- Costello, Dawson, Fishbein, Manian and Weidner 691
Human Immunodeficiency Virus Infection: Clinical Diagnosis -- Special Series -- Powderly 625

I

I'm Afraid of What Might Be Out There! -- Wooldridge -- Guest Editorial 139
Impotence: Its Evaluation and Treatment -- Gordon and Weinstein 632
Index to Advertisers -- 54,115,187,243,295,361,437,598,662,716,772,840
Information for Contributors -- 54,115,187,243,295,361,437,598,662,716,772,840
Initial Results of a Program in Liver Transplantation -- Brems, Biermann, Joshi, Kane, Hayek, Garvin and Kaminski 804
Insurance Plans Available to MSMA Members -- Directory 479

J

Jones, Randall, et al -- Magnetic Resonance Imaging: Failure to Demonstrate Spinal Arteriovenous Malformations in Four Patients 637
Joshi, Shobha, et al -- Initial Results of a Program in Liver Transplantation 804

K

Kaminski, Donald L, et al -- Initial Results of a Program in Liver Transplantation 804
Kane, Robert E., et al -- Initial Results of a Program in Liver Transplantation 804
Kent, Rockwell -- "Asgaard Winter" .... January
Kent, Rockwell -- "Sherwin-Williams Paint Co." .. December
Kern, Thomas G., et al -- Survey of Cancer Control Attitudes Among Missouri State Legislators 95
Kovac, S. Robert -- Vaginal Hysterectomy Combined with Liposuction 165
Kumar, Parveen and Crowley -- Neurological Application of Botulinum Toxin 815

L

Lababidi, Zuhdi, et al -- Bronchopulmonary Sequestration 271
Laboratory Diagnosis of HIV Infection --Arens and Storch -- Special Series 801
Lady Macbeth as a Terminal Case -- Crosby -- Guest Editorial 209
Large Cell Lymphoma Presenting as a Coronal Penile Lesion -- Gonzalez, Scott and Ungaro 278
Late Occurrence of Aortoenteric Fistula -- Harding and Nichols 696
Legislative Day a Success -- Dyer -- Auxiliary Message 205
Letters to the Editor --
  A plea for visibility -- Hinken 131
  And the DUR responds -- Rush 72
  Add ACP to specialty list -- Morris 11
  Comments on "The Race" -- Hirsch 131
  Error corrected -- Blanke 11
  Glaxo presents its views -- Bauman and Snidow 71
  HIV exposure in the emergency department -- Chaplin, Monafo, and Storch 11
  More Appreciation -- Ross 331
  Thanks Again -- Mongan 331
  Thanks MSMA -- Nilges 331
Life and Death -- Sessions -- Editor's Desk 675
Listening to Patients -- Budd -- Editor's Desk 315
Long, James, et al -- Splenosis Masquerading as Small Bowel Neoplasm 162
Llorens, Alfred, et al -- Splenosis Masquerading as Small Bowel Neoplasm 162
Lovinger, Warren C. -- Hepatitis A: Analysis of a Community Outbreak 27

M

MSMA Annual Convention --
  Minutes of the House of Delegates 378
  President's Inauguration Speech 389
  President's Message 393
  Auxiliary Report 395
  Resolutions 399
  Courtesy Resolution 405
  Committee and Commission Reports 406
  Convention Registration 413
  Summary of Council Minutes 417
  Missouri State Medical Foundation 420
  Exhibitors 421
MSMA --
  1989 PAC Sustaining Members 620
  1989 SuperPAC Members 620
  MSMA Committees and Commissions -- Directory 472
  MSMA Financial Statement for 1988 141
  MSMF Financial Statement for 1988 141
  MSMA Officers, AMA Delegates and Alternates, Councilors, Vice Councilors -- Directory 448
  Policy Manual --1989-90 818
  Preliminary Program for MSMA 131st Annual Convention 149
  Proposed Changes in the MSMA Constitution and Bylaws 825
Magnetic Resonance Imaging: Failure to Demonstrate Spinal Arteriovenous Malformations in Four Patients -- Ashraf, Jones, Noto, Shah and Shull 637
Making Medical Reading Count -- Benjamin -- Guest Editorial 79
Management of Sequelae of Chest Irradiation --Perez and Shapiro 746
Manian, Farrin A., et al -- Human Ehrlichiosis 691
Maxillofacial Trauma in Two Rural Level II Trauma Centers -- Schroeder 35
Medical School News -- 47,103,179,239,291,351,423,657,705,767,835
Metropolitan Specialty Organizations -- Directory 476
Metzler, Michael H. -- Seeing the Writing on the Wall -- Guest Editorial 611

Metzler, Michael, et al -- Splenosis Masquerading as Small Bowel Neoplasm 162
Milder, Benjamin -- "Passive Smoking" -- Poem 330
Missouri Physicians' Health Committee 663
Missouri Volunteer Health Agencies -- Directory 480
Monafo, William W. -- HIV exposure in the emergency department -- Letters to the Editor 11
Mongan, James J. -- Thanks Again -- Letters to the Editor 331
Monzon, Carlos M., et al -- Erythrocyte Pyruvate Kinase Deficiency 92
Morris, J.H. -- Add ACP to specialty list -- Letters to the Editor 11
Multimodality Therapy for Lung Cancer -- Perry -- Guest Editorial 733

N

Neurological Application of Botulinum Toxin -- Crowley and Kumar 815
New Members -- 45,101,175,233,287,349,427,651,701,765,833
Nichols, W. Kirt and Harding -- Late Occurrence of Aortoenteric Fistula 696
Nilges, Al -- Thanks MSMA -- Letters to the Editor 331
Noto, Angela M., et al -- Magnetic Resonance Imaging: Failure to Demonstrate Spinal Arteriovenous Malformations In Four Patients 637

O

O'Connor, Timothy A., et al -- Erythrocyte Pyruvate Kinase Deficiency 92
O'Dell, John -- "Tulip Beds: Missouri Botanical Gardens" .... August
O'Malley, James F. -- "Missouri Pasture" .... May
Olson, Lloyd C., and Reardon --Supraglottitis: A Simultaneous Presentation in a Parent and Child 744
Orman, Morton C. -- Physician Stress: Is It Inevitable? 21
Oro, John J. -- Determination of Death by Neurological Criteria 628

P

Passive Smoking -- Milder -- Poem 330
Perez, Carlos A. and Shapiro -- Management of Sequelae of Chest Irradiation 746
Perry, Michael C. -- Multimodality Therapy for Lung Cancer -- Guest Editorial 733
Perry, Michael C. -- Patients, Profits and Progress -- Guest Editorial 375
Perry, Michael C. and Thomas, Anne T. -- Autologous Blood Transfusion 157
Perry, Michael C., et al -- Survey of Cancer Control Attitudes Among Missouri State Legislators 95
Peters, Valerie A. -- Exploring the Underground 83
Peterson, Pete -- "Laclede's Landing" .... February
Photo Feature -- Transformation of MSMA Headquarters 618
Physician Recognition Awards -- 43,185,224,348,428,649,710,839
Physician Stress: Is It Inevitable? -- Orman -- Special Article 21
Physicians' Charity Care Program -- Dyer -- Special Article 467
Policy Manual 1989-90 818
Powderly, William G. -- Human Immunodeficiency Virus Infection: Clinical Diagnosis -- Special Series 625
Powderly, William G. -- Initial Clinical Management of the HIV-Infected Patient -- Special Series 685
Powderly, William G. -- Zidovudine -- Special Series 741
Practice Management -- 19,77,137,207,267,325,617,681,739,799
President's Page -- Singleton
  Dr. Jekyll and Mr. Hyde 321
  The Bitter Pill - Rationing 613
  Title XVIIII 793
  To Lead or To Follow 677
Progress Notes -- 7,67,127,199,259,311,370
Prolonged Spontaneous Remission of Case of Malignant Lymphoma -- Wolf 275
Psychiatry's Identity Disorder -- Clary -- Guest Editorial 731

R

Race, The -- Sessions -- Editor's Desk 133
Reardon, Jane Dice and Olson --Supraglottitis: A Simultaneous Presentation in a Parent and Child 744
Rosen, Barbara J., Corriveau and Dolan --Exercise Capacity Following Pulmonary Rehabilitation in the Elderly .. 751
Ross, Sydney P. -- More Appreciation -- Letters to the Editor 331
Roster of Members By Component Society -- Directory .. 520
Rush, David R. -- and the DUR responds -- Letters to the Editor 71

S

Sanders, Karen and Croughan -- Urine Testing in Impaired Physicians -- Commentary 341
Schroeder, Walter A. -- "Roses" .... April
Schroeder, Walter A -- Maxillofacial Trauma in Two Rural Level II Trauma Centers 35
Scott, Graham C., et al -- Large Cell Lymphoma Presenting as a Coronal Penile Lesion 278
Seeing the Writing on The Wall -- Metzler -- Guest Editorial 611
Sessions, Donald G. -- Editor's Desk

A Phone Call 263
AIDS -- It Won't Go Away 373
Being Inspired 15
Being Tested 735
Chief Complaint 791
Life and Death 675
Rationing 203
Thanks 73
Shah, Dipak C., et al -- Magnetic Resonance Imaging: Failure to Demonstrate Spinal Arteriovenous Malformations In Four Patients 637
Shapiro, Susan J. and Perez -- Management of Sequelae of Chest Irradiation 746
Shull, Sara Y., et al -- Magnetic Resonance Imaging: Failure to Demonstrate Spinal Arteriovenous Malformations In Four Patients 637
Simms, Sherri G., et al -- Breast Cancer Incidence Among Women in Missouri: Implications for Cancer Control 809
Singleton, Marvin A. -- President's Page
Dr. Jekyll and Mr. Hyde 321
The Bitter Pill - Rationing 613
Title XVIIII 793
To Lead or To Follow 677
Snidow, Jerry W. -- Glaxo presents its views -- Letters to the Editor 71
Solving a Wordy Mass -- Anderson -- Guest Editorial 211
Special Articles--
Hospital Antitrust Liability in Dealings With Downstream Providers --Testerman 333
Physician Stress: Is It Inevitable? -- Orman 21
Physicians' Charity Care Program -- Dyer 467
Special Series -- Human Immunodeficiency Virus Infection: Clinical Diagnosis -- Powderly 625
Special Series -- Initial Clinical Management of the HIV-Infected Patient -- Powderly 685
Special Series -- Zidovudine -- Powderly 741
Splenosis Masquerading as Small Bowel Neoplasm -- Long, Llorens and Metzler 162
Storch, Gregory -- HIV exposure in the emergency department -- Letters to the Editor 11
Storch, Gregory A., and Arens --Laboratory Diagnosis of HIV Infection --Special Series 801
Supraglottitis: A Simultaneous Presentation in a Parent and Child --Olson and Reardon 744
Survey of Cancer Control Attitudes Among Missouri State Legislators -- Brownson, Davis, Harmon, Kern and Perry 95

T

Tarneja, Kailash -- Photograph -- Melting Snow .... March
Taylor, Larry -- Photograph -- MSMA Headquarters .... September
Testerman, Michael R. -- Hospital Antitrust Liability in Dealings With Downstream Providers -- Special Article 333
Testing for Drugs of Abuse in Urine -- Turk 337
The Bitter Pill - Rationing -- Singleton -- President's Page 613
The Healthy Tan: A Modern Misnomer -- Thomas -- Guest Editoral 327
Thomas, Anne T. and Perry, Michael C. -- Autologous Blood Transfusion 157
Thomas, Ginny -- Auxiliary offers opportunities for all -- Auxiliary Message 615
Thomas, J. Regan -- The Healthy Tan: A Modern Misnomer -- Guest Editorial 327
Title XVIIII -- Singleton -- President's Page 793
To Lead or To Follow -- Singleton -- President's Page 677
Tobacco or Health -- Chapman -- Guest Editorial 81
Transformation of MSMA Headquarters -- Photo Feature 618
Tucker, George and Garcia, Delia M. -- Carcinoma of the Pancreas 89
Tucker, Leslie E. -- Esophageal Dilation 220
Turk, John -- Testing for Drugs of Abuse in Urine 337
Tuteur, Peter G. -- A Health Care Proposal: Universal Access With Fiscal Responsibility --- Guest Editorial 787

U

Ungaro, Peter C., et al -- Large Cell Lymphoma Presenting as a Coronal Penile Lesion 278
Urine Testing in Impaired Physicians -- Croughan and Sanders -- Commentary 341

V

Vaginal Hysterectomy Combined with Liposuction -- Kovac 165

W

Walls, Joseph T., et al -- Bronchopulmonary Sequestration 271
Wankum, Jean -- A.S.A.P. -- Auxiliary Message 75
Weidner, John, et al -- Human Ehrlichiosis 691
Weinstein, Stephen H. and Gordon -- Impotence: Its Evaluation and Treatment 632
Wolf, Jack W. -- Prolonged Spontaneous Remission of Case of Malignant Lymphoma 275
Wooldridge, Wilfred E. -- I'm Afraid of What Might Be Out There! -- Guest Editorial 139

Z

Zidovudine -- Powderly -- Special Series 741

WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, PIE Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality. PIE Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

Physician Managing Boards, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

Quality Rated Insurance Program: a modified claims-made plan which works in the physician's favor to reward loss-free physicians and provides added protection not available in other policies.

A Financially Sound Reinsurance Program with Lloyd's of London, the world's most prestigious reinsurer.

An Aggressive Defense Team, experienced in all types of medical liability claims and willing to fight for your cause.

If your standards match ours, let's talk business.

The PIE Mutual Insurance Company
The Galleria & Towers at Erieview
1301 East Ninth St., Cleveland, OH 44114
(216) 781-1087

SO WE CAN HOLD THE PREMIUMS DOWN.

AGENT:

SOPYLA INSURANCE GROUP
4600 Madison Avenue, Suite 1224
Kansas City, MO 64612
(816) 561-5523

AUTHORIZED REPRESENTATIVES:

INSURANCE MANAGEMENT CORPORATION
IMC Plaza, 4333 Madison
Kansas City, MO 64111
(816) 756-1410
(800) 821-5401

ROLLINS BURDICK HUNTER OF MISSOURI, INC.
500 Washington Avenue
Suite 1100
St. Louis, MO 63101
(314) 241-8010

4651 28

VASOTEC®

(ENALAPRIL MALEATE MSD)

VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema.* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident.

If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis. Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function:* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia. Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia. In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia. Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia. Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions.

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents. VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium. VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use. Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION. The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE. The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular. Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), cardiac arrest, pulmonary embolism and infarction; rhythm disturbances, atrial fibrillation, palpitation.

Digestive. Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric. Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory. Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia; an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema. Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit. Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests. Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension.* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment. The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure,* WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486. J6VS18R2(817)

MSD
MERCK
SHARP&
DOHME

IT MAY CHANGE THE WAY YOUR PATIENTS FEEL ON ANTIHYPERTENSIVE THERAPY

MSD
MERCK SHARP & DOHME

FOR MANY HYPERTENSIVE PATIENTS
START WITH ONCE-A-DAY

VASOTEC®

(ENALAPRIL MALEATE | MSD)

For a Brief Summary of Prescribing Information, please see next page of this advertisement.

Copyright © 1987 by Merck & Co., Inc.

J6VS18R